THE POLITICAL ECONOMY OF CORPORATE SOCIAL RESPONSIBILITY AND COMMUNITY DEVELOPMENT: A CASE STUDY OF NORWAY'S SNØHVIT NATURAL GAS COMPLEX

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A

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Abstract

This project uses stakeholder evidence from semi-structured interviews to analyze the relative effectiveness of an oil company's stated "corporate social responsibility" (CSR) initiatives in a new, Arctic host community. Specifically, this project analyzes the outcomes of StatoilHydro initiatives to date in Hammerfest, Norway, where the *Snøhvit* (Snow White) natural gas project began production in 2007. It gauges the ability of "socially responsible" approaches to development to internalize negative externalities and promote positive "spin-offs." Arctic countries are increasingly prioritizing petroleum development. The convergence of dramatic climate change, increasing energy demands, and high energy prices has made the Arctic an alluring frontier for the oil industry and Arctic governments. Small Arctic communities are increasingly playing host to large energy projects with the potential for dramatic cultural, social, environmental, and economic upheaval, but also economic growth and increased human capital. In this case study, CSR initiatives resulted in a broader accounting of social costs and benefits, an outcome that better internalized externalities, and *pareto*-improving trades between stakeholders and industry.

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1 Introduction

A convergence of rapidly expanding global energy demands, high oil and gas prices and newly accessible reserves because of climate change is ushering forth unprecedented Arctic petroleum exploration and development. One result is that Arctic communities are increasingly interfacing with large energy companies, increasing the potential for dramatic cultural, social, environmental, and economic upheaval, but also the potential for economic growth and prosperity.[1]

As petroleum companies expand operations in the Arctic[2] and other peripheral regions, they confront a series of unique challenges, and their activities pose certain risks for new host communities. Recent events in Alaska's North Slope indicate some of the conflicts that may arise. Shell's plans to develop offshore gas projects in the Beaufort Sea were thwarted by some members of the Inupiat community, through federal courts, who feared a particular risk to their subsistence whaling practice. Other factions of the community ardently support oil and gas activities, citing an opportunity for economic development in a region with few other opportunities.

Throughout the Arctic, companies like Shell contend challenging physical and social environments. In spite of moderating temperatures and retreating sea ice, the Arctic remains a harrowing environment within which to operate. Human and environmental

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[1] *Arctic Council*, "2008 Oil and Gas Assessment." Arctic Council (accessed 1.23.08)
[2] Bevanger, Lars. "Norway's Arctic Oil Bonanza." BBC. August 13, 2006. http://news.bbc.co.uk/2/hi/business/4776543.stm (accessed 11.01.2006) *and* Mouawad, Jad. "Oil tensions for Natives in Alaska," *International Herald Tribune*. December 4, 2007. http://www.iht.com/articles/2007/12/04/business/alaska.php (accessed 12.4.2007)

safety is difficult to ensure. The Arctic environment is fragile and slow to repair itself after catastrophic oil spills or damage from heavy machinery (Patin 1999, Short et al. 2007). Companies are also confronting small, isolated communities - often with entirely or predominantly indigenous populations - that combine subsistence with a market economy to varying degrees. These communities, already vulnerable under new environmental challenges, must now confront the impacts from a mobile and exogenous labor force, industrial development, energy politics, and an influx of new wealth. Though oil and gas production is regularly associated with wealth production, it has routinely proven disastrous for rural communities in other parts of the world when they are ill-prepared for rapid changes and unaccustomed to large-scale industrial activity (Ross 1999, Corden and Neary 1982, Gelb 1988, Karl 1997).

Information and preparedness can improve the outcomes for stakeholders. In a rapidly changing Arctic, scientific information helps communities adapt and prepare for climate change. Similarly, in a changing socio-economic environment spurred by expanding oil and gas activity, communities need timely and accurate information to develop strategies for community resiliency, the capacity to demand best practices from industry, and to generate “win-win” outcomes.

Industry also has an opportunity to promote positive outcomes, and is in an advantageous position to do so. “Corporate Social Responsibility” (CSR) initiatives by firms world-wide have acknowledged the risks of unrestrained development, and the responsibility of corporations to minimize them. The World Business Council for Sustainable Development defines CSR very generally as, “the continuing commitment by

business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large." CSR can therefore be applied to issues ranging from human rights to the environment, but certain aspects of CSR are universal. CSR is always characterized by voluntary and "beyond compliance" measures taken by industry to reduce harm from its business. CSR is becoming increasingly normalized in global business, and increasingly institutionalized through UN initiatives like the Global Compact, by the European Commission and voluntarily by businesses.

The rhetoric of CSR, however, does not always match the reality (Boasson and Wettestad 2007, Frynas 2005, Margolis and Walsh 2001). Its loose and ambiguous nature is fodder for detractors. On the other hand, strict regulation of oil and gas activities, especially in the Arctic, is oftentimes lacking – the result of "soft-law" and weak institutions (Offerdal, 2007). This makes CSR policy, its incorporation of local stakeholders, and its potential to promote positive outcomes, even more important to study.

The challenges and opportunities are clear. In spite of documented risks, climate change, energy conservation, and renewable energy development, the demand for oil and gas will continue expanding for decades to come.[3] This demand will bring oil and gas development to more Arctic communities, and along with it will come the potential for socio-cultural upheaval as well as opportunities for wealth and increased development.

[3] *Energy Information Administration*. "International Energy Outlook 2007" Energy Information Administration. http://www.eia.doe.gov/oiaf/ieo/oil.html (accessed 1.11.2008)

The challenge for communities is to respond appropriately to preserve sovereignty, health, and economic stability, whether their economies are subsistence or market-based.

This paper examines the small fishing community of Hammerfest in northern Norway. Hammerfest now plays host to an advanced Liquefied Natural Gas (LNG) facility and is the new capital of what has become Norway's "Arctic Energy Province." Finnmark County, where Hammerfest is located, was until recently known best for its out-migration and declining fishing industry. Therefore, some general questions inspire this project: What is the fate of small communities in the wake of such dramatic development? Would Hammerfest streets be paved in gold, or would pollution spoil the remnants of its fishing industry? Would large industry trammel the concerns of local citizens, or would sustainable solutions be found to reinvigorate the community's economy and livelihood? To answer these questions, this project examines the case of Hammerfest and the "Snøhvit" (Snow White) LNG facility through the theoretical lens of externalities, or the unintended consequences of any business practice, including both positive "spin-offs" for the local economy as well as negative ones like pollution.

StatoilHydro - the company at the center of this paper – is an important organization to examine for several reasons. Its operations in the Barents Sea represent the first petroleum development in northern Norwegian waters. This reverses a longstanding Norwegian "no drill" policy in waters above 62 degrees North latitude (Lind and Mackay 1979).[4] As a corporation, StatoilHydro has clearly stated aims to increasingly explore and develop Arctic waters as its North Sea oil production continues

[4] And the Minister of Petroleum and Energy, http://www.regjeringen.no/en/dep/oed/Subject/Oil-and-Gas/Norways-oil-history-in-5-minutes.html?id=440538 (accessed 06.07.2008)

to decline.[5] The corporation is already involved in Canadian oil sands, recent Chukchi Sea leases, and in the North Atlantic near Newfoundland and Nova Scotia.[6] StatoilHydro also has long-stated and evolving public commitments to CSR. For these reasons, the corporation's experience provides a useful example of the challenges facing industry in the North, and the potential outcomes of CSR in practice.

This project recognizes that StatoilHydro has a highly evolved CSR strategy and is considered an industry leader in this respect. But it questions how effective these policies can be with respect to the externalities in Hammerfest and their impacts on local stakeholders. This project is therefore designed to answer a specific question: *Was CSR able to mitigate negative externalities and promote positive externalities associated with Snøhvit's development?* "Effectiveness" is measured by considering whether *Pareto*-improvement trade-offs resulted from CSR, and analyzing the alternatives, including CSR in relation to economic and command-and-control incentives. To assess the economic efficiency of CSR, this paper further attempts to estimate whether or not the marginal private costs of CSR, to StatoilHydro, approximate the marginal social benefits gained by stakeholders. This cannot be done quantitatively here, but is nonetheless assessed qualitatively throughout the paper.

After a "Background" chapter (Chapter 2) including a review of important terms and concepts, with special attention to CSR, the framework for this study is further elaborated (Chapter 3). This includes a detailed discussion of the analytical foundations of the paper including Stakeholder Theory, Externalities and Actor Network Theory

[5] Statoil. *FACTS 2007;* StatoilHydro, *Going North, Sustainable Development 2007*
[6] StatoilHydro, *Going North, Sustainable Development 2007*

(ANT). Chapter 4 reviews the political economy of oil and gas in Norway, including a discussion of the regulatory regimes governing the industry and a consideration of CSR's place within this context. Methodology is discussed in Chapter 5, followed by a chapter (Chapter 6) devoted to each of the stakeholders identified for this project and results. Separate sections include pertinent background and an analysis of outcomes resulting from CSR policies for each of the stakeholders. The final chapters consider a discussion of the results, implications and limitations to the research, while Appendix A lists interviewees and Appendix B describes the timeline of Snøhvit's development.

2 Background

Hammerfest Norway existed without oil and gas for over a century, and at times prospered. Only very recently has petroleum development taken place, which provides a laboratory for observing how progressive CSR policies were developed, implemented, and how they worked.

2.1 Corporate Social Responsibility

Corporate Social Responsibility is an increasingly scrutinized phenomenon (Figure 2.1). It is both lauded for its potential to benefit communities, and castigated for its ambiguity and difficult-to-quantify efficacy. For example, oil companies that contribute to Habitat for Humanity, or support a neighborhood athletic field, might consider themselves leaders in CSR. Similarly, a company – British Petroleum most notably – might heavily invest in marketing that emphasizes their environmental stewardship or work in sustainable energy projects.

But if, at the same time, the company continues to pollute through day-to-day operations, or its negligence leads to a serious oil spill or a refinery explosion, then detractors can dismiss such claims as mere “greenwashing.” StatoilHydro invests in offshore wind farms and hydrogen filling stations, but it also drills for oil in fragile Arctic waters and politically unstable countries. Yet StatoilHydro considers itself a CSR industry leader. These uncertainties continue to plague CSR analysts and policy-makers who shape the ongoing debate. They also lend credence to CSR detractors.

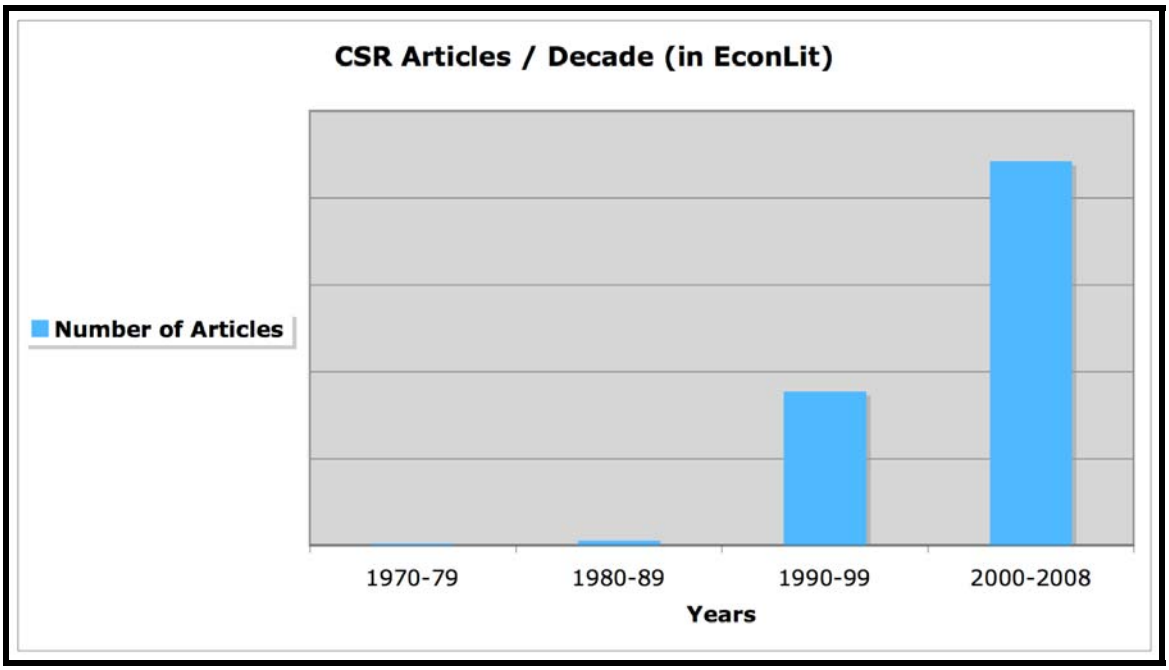

Figure 2.1 Articles with "Corporate Social Responsibility" as a keyword determined by EconLit per decade.

2.1.1 The Business Case and the Problem of "Greenwashing"

CSR has gained acceptance, even among large corporations, because it allows for a level of self-regulation - a trend that has also been increasingly institutionalized in a global business environment – and a potentially more efficient means of "damage control" than more heavy-handed government intervention. But consensus on CSR as a competitive advantage is still lacking, and evidence of "greenwashing" still persists (Laufer 2003).

Milton Friedman, as early as 1970, quipped that "the social responsibility of companies is to maximize profit." Following in this vein, much of the CSR literature has devoted itself to examining the relationship between CSR and profitability (Margolis et al

2007, Wu 2006, Orlitzky et. al 2003, McGuire 1998, Alexander and Buchholz 1978). Much of this research underlined CSR's incompatibility with profit-maximization and free-market capitalism, disparaging it as needless and inefficient corporate mismanagement – a mis-allocation of precious resources.

Regardless of profitability, CSR is continues to be criticized. Jedrzej George Frynas (2005) argues that, while oil and gas companies are *leaders* in CSR - responsible for $500 million in community development projects in 2001 alone - much of the money is ill-spent and ineffectively used. *Behind the Mask: The Real Face of CSR*, a report by Christian Aid, lambastes CSR as ineffective chicanery at best (2004).

Frynas (2005), however, isolates a number of motivating factors for CSR implementation: obtaining a competitive advantage, maintaining a stable work environment, managing external pressures, and keeping employees happy. He suggests that these factors trump more genuine *development* concerns and generally undermine development projects. An example would be schools that were constructed by an oil company, but not staffed. He concludes that the "business case" is the primary impetus for petroleum industry CSR, and argues that there is an "incompatibility of corporate objectives with developmental objectives." This last point is echoed by Margolis and Walsh (2001), Gulbrandsen and Moe (2005), and Ite (2004).

Ironically, whether advocating for, or criticizing CSR, it is almost universally agreed upon that a "business case" for CSR is imperative. While this undermines the idea of any altruistic motivation behind CSR, it forces a consideration of non-market valuation, like the indirect value of ecological or cultural service flows. Portney (2005)

and Esty (2005) both acknowledge opportunity of CSR to account for a greater breadth of costs and benefits that generate socially efficient outcomes *in theory*, but also acknowledge the lack of empirical evidence. This thesis addresses both the business case of CSR through its analysis of cost and benefits to StatoilHydro with respect to CSR, and provides empirical evidence of CSR outcomes in practice.

2.2 CSR and Extractive Industries

Much of the CSR literature focuses on extractive industries. This is in part because of its potential for severe environmental externalities and negative impacts on communities. Lars Gulbrandsen and Arild Moe (2007) considered CSR in a case study of oil producer BP in Azerbaijan. Their case study, in contrast to the more theoretical approach of Frynas, allowed for the peculiarities of the host government, its laws, regulations, and history, to be considered in the context of a company's CSR campaign. Similarly, it allowed for more time to dwell on the specifics of the company's efforts – positive or negative.

The authors note several shortcomings in BP's CSR practice in Azerbaijan. But they also note major shifts in BP's strategy, from small-scale projects to macro-level causes like financial transparency. Their study also highlights the *institutional shortcomings* in the Azeri government that made CSR difficult to implement successfully – an important issue in all aspects of development aid, which also raises the broader question of the role of corporations versus national governments in providing social services – a topic largely beyond the scope of this paper. In spite of shortcomings, however, Gulbrandsen and Moe (2007) consider BP's efforts a model for extractive

industries around the world. What the authors failed to consider, however, was how BP's CSR campaign altered the situation for *local stakeholders* who are less enfranchised than government officials.

Recent literature continues to examine the role of petroleum and mining companies in developing countries (Akpan 2006, Ite 2004, and Kapelus 2002). Special consideration of the "resource curse" is typical, outcomes are largely negative, and positive results qualified (Anderson and Bieniaszewska 2006). In all cases, CSR and externalities are not central to the study.

A small body of literature, however, has noted positive CSR outcomes for stakeholders and this includes examples from the extractive industries. May (1999) asserts that a successful outcome in Peru, between local stakeholders and Shell, was a direct consequence of thorough stakeholder analysis and dialogue (an approach StatoilHydro advocates). This lends credence to the *potential* for CSR to result in positive outcomes, especially if it was successful in a less developed country compared to a progressive country like Norway.

This thesis contributes to the literature by focusing implicitly on the stakeholder analysis of CSR within the context of externalities. It therefore addresses both the lack the theoretical affect of CSR on externalities by collecting empirical evidence based on stakeholder evidence, and additionally considers the efficiency of outcomes. By analyzing the costs and benefits of CSR in Hammerfest, further contributes to the premise of a business case for CSR.

2.3 Gaps in CSR Literature

The literature to date provides little stakeholder analysis, and little consideration of the relationship between CSR and externalities. This is surprising considering the emphasis on stakeholder outreach in CSR, and the supposed goals of CSR in reducing undue harm to stakeholders. Margolis et al (2007), among others (Hay et al 2005, Portney 2005), acknowledge that empirical evidence is lacking regarding CSR's ability to affect externalities. This remains a frontier for CSR scholars, partly because CSR is difficult to quantify. In the meantime, the literature continues to dwell on narrow definitions of CSR that underscore a voluntary, "beyond compliance" concept that is incompatible with economics and profit-maximization, and still labors the question of whether or not corporations "should" practice CSR (Portney 2005).

This paper attempts to address some of these shortcomings. It emphasizes the role of CSR in addressing the negative and unintended consequences of business practice, while considering its potential to foster positive externalities at the same time. It has been clearly demonstrated, however, that CSR can take many forms, many of which result in very little besides corporate "greenwashing." Modern CSR research must now provide a more precise framework of analysis, while not necessarily quantitative, and one that can address the impacts of CSR on externalities as they affect local stakeholders.

3 Framework

Stakeholder information was collected and analyzed using Actor Network Theory to measure the perceptions of each key stakeholder group as to the efficacy of CSR in affecting externalities. Other sources of information including websites and publications are used to test and compliment the stakeholder information. This section describes the nesting of different analytical tools utilized to examine outcomes in Hammerfest. This thesis analyzes Corporate Social Responsibility with respect to its ability to mitigate the negative externalities associated with petroleum development in small communities, and to stimulate and bolster positive outcomes.

3.1 Stakeholder Theory

Stakeholder theory is a cornerstone of CSR. Its place in business management has increasingly become *de rigeur* and represents the latest evolution in socially responsible business practice. Corporate Social Performance (CSP), it is argued, hinges on well-developed and effectively implemented stakeholder analyses (Clarkson 1995). But defining critical stakeholders can be challenging (Downey 2002, Vos 2003). Post et al (2002: 8) suggest that stakeholders in a corporation are, “the individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and that are therefore its potential beneficiaries and/or risk bearers.” The different stakeholders of a single firm share common risks: “a possibility of gaining benefits or experiencing losses or harm, as a result of corporate operations” (Post

et al 2002: 8). This definition emphasizes both the risks and benefits to stakeholders from industry making it important for the Hammerfest case study because stakeholders there share in the risks and rewards of Snøhvit unevenly.

Kochan and Rubenstein (2000) are more specific, citing three criteria for identifying "significant" stakeholders:

- They supply resources important to the firm's success
- They place something of value "at risk" – their own welfare is directly affected by the firm and outcomes of a project.
- They have "sufficient power" to affect the firm's performance, favorably or unfavorably.

The Hammerfest case study conducted here favors the middle criterion when isolating stakeholders in researching for this project. With respect to the first criterion, Kochan and Rubenstein (2000) seem to ignore disenfranchised and passive groups at risk from negative externalities. With regards to the third, the stakeholders in Hammerfest vary in their abilities to influence StatoilHydro, but in general, significant asymmetries in "power" characterize stakeholders in Hammerfest, compared to industry. This project proceeds under the premise that CSR might transfer some of this power to local stakeholders.

Importantly, stakeholder theory also emphasizes that firm financial performance depends on positive "stakeholder management" – or the successful cooperation with stakeholders, and not just company shareholders. In this manner, stakeholder input can reveal social costs unaddressed otherwise by a firm's cost-benefit analysis. And while detractors – adherents to the Friedman doctrine of 'profit maximization equals social

responsibility' - continue to question stakeholder theory's role in business management, it is increasingly normalized, and makes an appropriate framework from which to analyze CSR in Hammerfest.

3.2 Actor Network Theory

This thesis uses a subset of Stakeholder Theory called Actor-Network Theory (ANT). ANT allows for a systematic analysis of how stakeholders perceived CSR as it was implemented by StatoilHydro in Hammerfest. It also allows for an analysis of how stakeholders reacted to CSR and how outcomes developed (Egels 2005). These stages, including the last stage, "mutiny," develop cyclically until the focal actor (StatoilHydro) and stakeholders achieve a level of understanding. ANT stages include:

- *problematisation*, in which the focal actor (Statoil in this project) formulates the definition that the actor wants to see adopted.
- *intressement*, in which the focal actor attempts, via a series of processes, to lock other actors into the defined roles.
- *enrolment*, or when the other actors accept their assigned roles.
- *mobilization*, or when the focal actor attempts to mobilize all actors involved in the problematisation to play their assigned roles.
- *mutiny*, or when actors refuse to assume the role assigned in problematisation.

Qualitative methodology, as employed here, is consistent with ANT-based research (Egels 2005). Each stage is observable in the Snøhvit case study, though they are heretofore undocumented. Each individual stage can be scrutinized by addressing the following questions: *How was CSR defined and implemented? How did different actors respond? What was the final outcome to date?*

An example of ANT analysis is how a stakeholder responds to the advent of a new petroleum development, and particularly to the CSR initiatives of the focal actor:

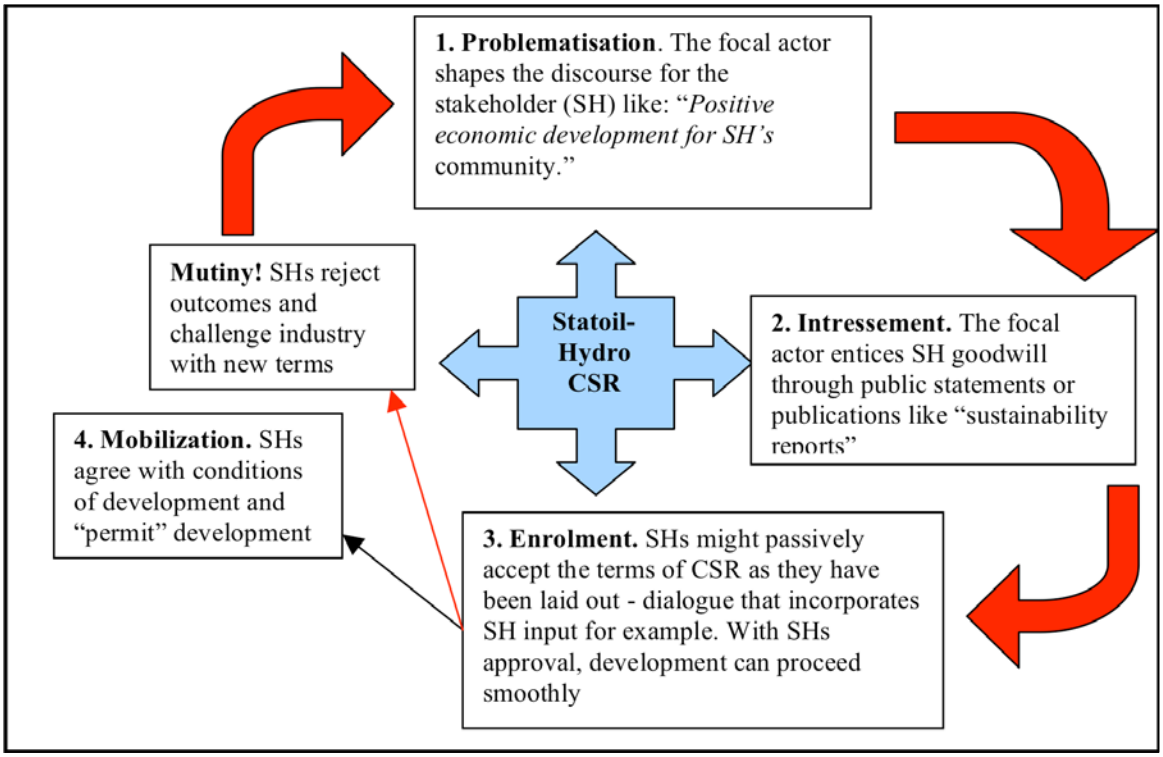

Figure 3.1 CSR progression in a community using ANT

Stakeholders, according to ANT, will agree to the CSR initiatives set forth and defined by StatoilHydro after a series of industry-led efforts to define the scope of CSR. Carbon reduction efforts, for example, are a major component of StatoilHydro's CSR campaign, even if the threat from climate change poses less concern to the average *local* stakeholder (though it was a major concern for environmental NGOs). Economic development and local employment was a positive outcome that StatoilHydro loudly

trumpeted, even though all indicators pointed to an exogenous, fly-in-fly-out labor supply and contracts for non-local suppliers.

If local stakeholders resist at any point along the ANT trajectory, they are engaging in "mutiny."[7] Fishermen, as will be discussed more thoroughly in Section 6.2, resisted elements of Statoil's "enrolment" efforts, even while accepting the premise of petroleum development in the Barents Sea. The objections would have significant impacts on the nature of development however, and lessen the harm fishermen experienced. On the other hand, local business leaders mutinied too, and forced considerable revisions of CSR policies that eventually led to increased gains for community developers.

This study goes further, however, by considering CSR through the lens of property rights, transaction costs, and especially positive and negative externalities like those described above. It uses stakeholder theory, and ANT in particular, to help analyze CSR's overall efficacy in affecting externalities.

3.3 Externalities

In this thesis it is hypothesized that CSR has the potential to dampen the harmful effects of negative externalities, while simultaneously multiplying the benefits stemming from positive externalities. But to understand the potential relationship between CSR and externalities it is first necessary to specify the meaning and importance of externalities.

[7] An unfortunate label considering stakeholders' right, and perhaps obligation to consider the terms of local development and its impact on the community. But it nonetheless suggest a deliberate breaking from an industry-led initiative.

Economists consider externalities a market failure, or among a set of circumstances that broadly represent a market's inability to distribute scarce resources efficiently.

It is assumed that private actors make economic decisions based on their estimation of the costs and benefits that would accrue to them. These private costs and benefits are accurately reflected in market transactions and results in market prices that efficiently allocate resources. When there are spill-over effects on others who are not party to the transaction, however, these "external" costs and benefits are not considered in the economic decision making of the private actors. The market price and allocation are therefore *not* efficient.

Pollution, for example, is produced in quantities beyond what is "socially optimal" because the polluter does not incur the "true" costs of pollution to the environment or human health. The polluter's costs, in this case, are "externalized" to the general public (Clapp and Dauvergne 2005). Some economists argue that externalities can be "internalized" by assigning costs through taxes or other economic incentives. A firm would consider the cost of polluting alongside the costs of other inputs like capital and labor, and accordingly adjust output downwards.

With respect to pollution (which is a risk associated with Snøhvit through CO_2 from the well-stream, gas flaring, and its gas power plant emissions) the "optimal level" of pollution from an economic efficiency standpoint would be found at the intersection of the marginal abatement cost curve and marginal damage function (Kahn 2005) (Figure 3.2).

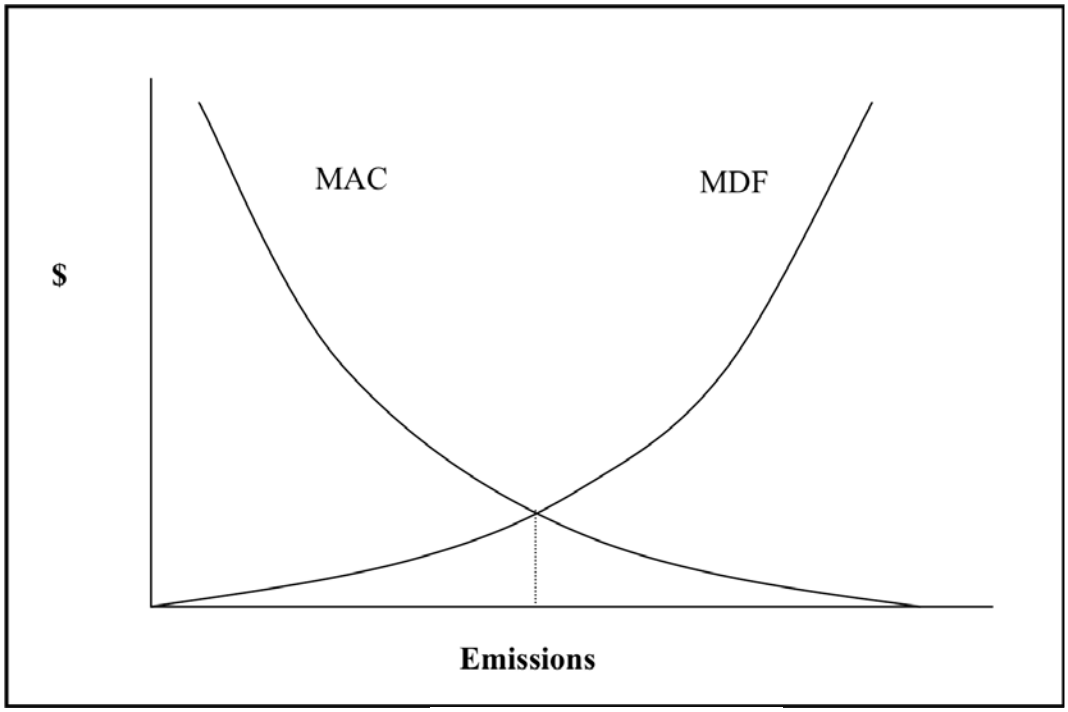

Figure 3.2 Marginal Abatement Cost (MAC) and Marginal Damage Function (MDF) Curves

The marginal damage function, which represents the costs associated with damage from one additional unit of pollution, has a slope that increases at an increasing rate (Kahn 2005). Thus for every additional unit of pollution, soot from gas flaring for example, damage costs associated with this unit *increase*. The marginal abatement cost curve, on the other hand, has a slope that decreases at a decreasing rate, suggesting that for every additional unit of pollution that is removed from the environment, it is increasingly expensive. Easy, cost-efficient attempts to reduce pollution remove large amounts of pollution. But when moving in the direction of zero pollution, the costs associated with cleaning up increase at an increasing rate (Kahn 2005).

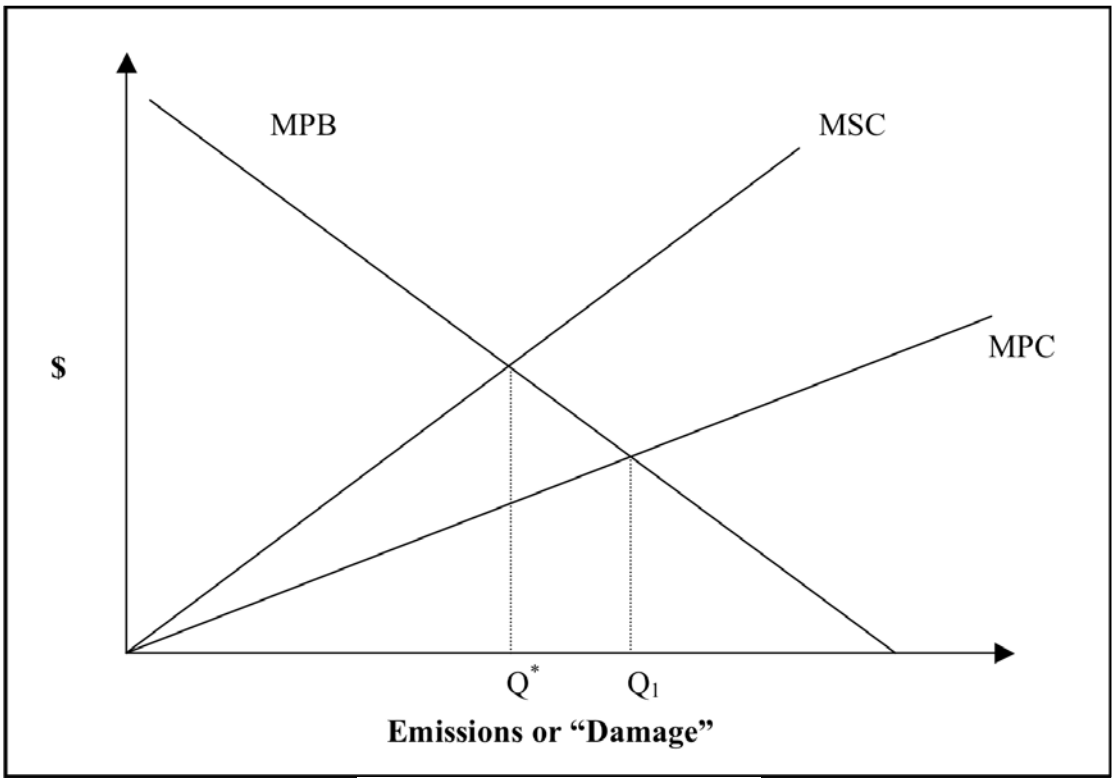

Figure 3.3 Marginal Private Benefit (MPB) and Marginal Social Cost (MSC) Curves

From a broader social perspective, another way to interpret Figure 3.2 is that externalities will be produced at a point where marginal social benefit is in equilibrium with marginal social costs. This also defines *Pareto optimality*, the point at which resources cannot be reallocated to increase one person's well-being (utility), without reducing the well-being of someone else (Hanley et al 1997). In Figure 3.3, a negative externality is internalized by accounting for greater marginal social costs than marginal private costs. Accounting for the greater social costs in this manner (difficult to do quantify it is important to note) results in a more efficient reallocation of resources, and

less pollution. On the other hand, positive externalities, like greater economic development in Hammerfest for example, are best encouraged by more accurately accounting for the marginal social benefit created from development initiatives (see Figure 3.4).

But how these costs and benefits are considered is yet another crux, and hinges in part on how property rights are assigned.

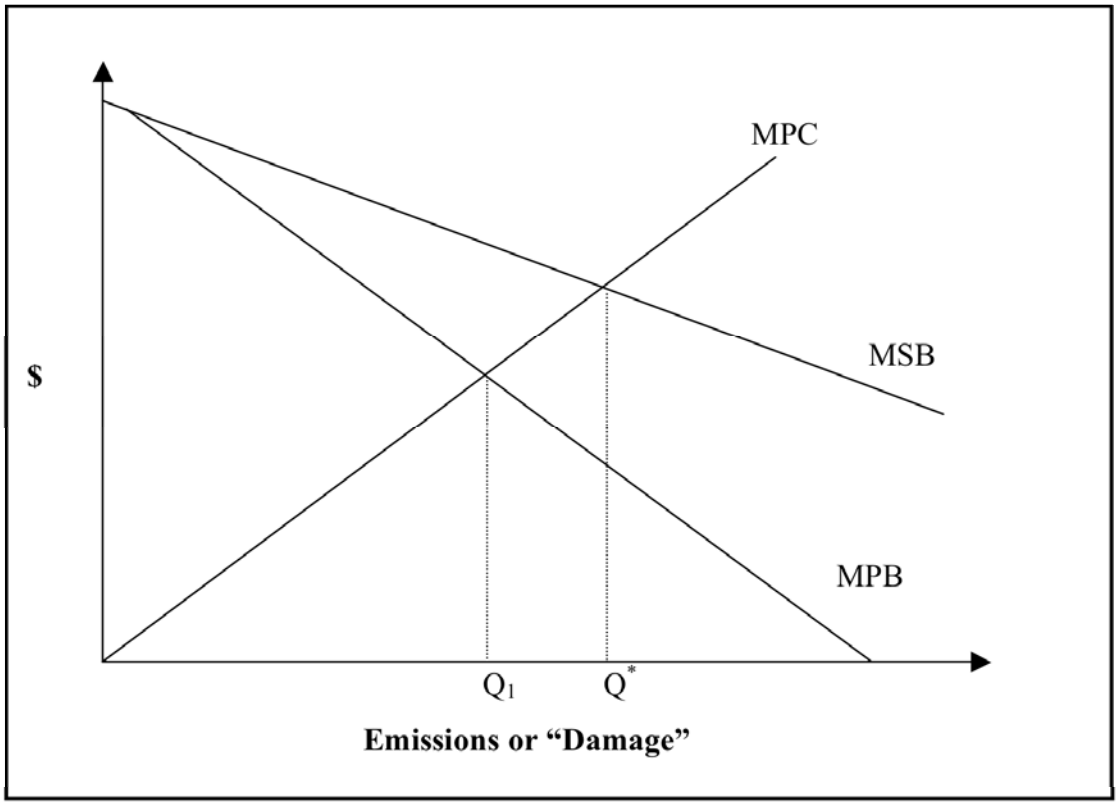

Figure 3.4 Marginal Social Benefits (MSB) Augmenting Positive Externalities

3.3.1 Property Rights and Other Contributing Factors

Hanna (2001) makes clear that property rights are an essential element of resource management. She also asserts that unambiguous property rights "resolve the problem of externalities" (2001). In the case of Hammerfest, a complicating factor is the open access resources in question, which makes property rights ambiguous.

Open access resources and public goods, like the Hammerfest airshed or Barents Sea itself, are characterized by non-rivalry and non-excludability. While StatoilHydro has subsurface mineral rights that it paid for, and can exclude other energy companies from exploiting those resources, it needed to deliver the wellstream to its LNG facility by pipeline over the Barents Sea floor. The sea floor is also a valuable resource for fishermen who depend on its productivity. Damage from an undersea pipeline might negatively impact fishermen, or restrict access to their fisheries, but fishermen's rights to exclude StatoilHydro from this resource are also in question.

In a different manner, pollution from gas flaring affects the air quality of Hammerfest, and thus the well-being of its citizens. Soot that settled on grazing lands in August 2008 might directly impact the health of Sámi reindeer, and harm the Sámi economy. Finally, CO_2 emissions from both flaring and the gas power plant are "transferable" externalities (Hanna 2001) that impact anything from small island states and Australian farmers to Arctic ecosystems.

The monetary value of these impacts have not been quantified, and nor has the service flow of clean air to Hammerfest citizens, their health, or their tourist industry. The impact of StatoilHydro's industrial facility on Hammerfest's "viewshed" has also not

been quantified. In these latter cases, the public "bad" - or when the loss suffered by one person from poor air quality does not reduce the loss suffered by another - will be oversupplied by the market (Hanley et al 1997). This is in accordance with Hanna's observation that "indirect uses," like ecological services for example, are less quantifiable than direct uses (like fish landings or barrels of oil), and therefore more prone to externalities (2001).

Separately, it is clear that the marginal cost of CO_2 reduction on the part of StatoilHydro is expensive. Initial carbon capture and storage (CCS) expenditures were relatively small (and even necessary for LNG),[8] but additional CO_2 reduction from the gas plant is less feasible, more expensive, and is not being pursued. Economic incentives in the form of a carbon tax have already been initiated in Norway, and provide one disincentive to emissions. Carbon taxes started in 1991 now equal 50 dollars per ton of CO_2.[9] Tax incentives are difficult to calibrate accurately, however, and externalities can persist even after their enactment (Kahn 2005).

It is still unclear, therefore, where the "optimum" equilibrium lies, and how much pollution is tolerable by Hammerfest, Norway, or the international community. With respect to Hammerfest stakeholders and CSR's role, additional consideration of property rights and transaction costs are necessary.

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[8] For Snøhvit, the investment costs for the CO_2 pipeline, well and compressor train investments were calculated to be about € 150 million (Kårstad, 2002). At the same period, the total investments for phase 1 of the project were calculated to be about € 2.9 billion, and all phases, € 4.3billion (Heiskanen 2006).

[9] Stoichevski, William. "Norway: Carbon tax permitting oil-industry growth," *Scandinavian Oil and Gas Magazine*. http://www.scandoil.com/moxie-bm2/carbon/technology_carbon/norway-carbon-tax-permitting-oil-industry-growth.shtml (accessed 09.01.2008)

Daniel Bromley (1991) defines property as a "benefit stream" and a property right as a "claim to a benefit stream that the state will agree to protect through the assignment of duty to others who may covet, or somehow interfere with, the benefit stream" (2001: 2). Bromley therefore favors a perspective in which property rights are based on social contracts. A. Allan Schmid (1995) emphasizes a triadic relationship between individuals with respect to a resource (versus between an individual and a resource). As such, "owners act as they wish and, if rights are exchangeable, listen for bids from non-owners to do otherwise" (1995: 46). Externalities, according to Schmid, do not disappear, but their direction, and therefore damage or benefit, changes depending on the "distribution of ownership" (1995).

The social contract inherent in property rights (Coase 1960, Bromley 2001, Schmid 1995) has important implications for Hammerfest stakeholders. CSR might provide stakeholders implicit property rights – allowing fishermen to demand changes in StatoilHydro's undersea pipeline course for example (though it is unclear which party has enforceable property rights on the Barents Sea floor). This social contract, as Coase and Schmid note, depends on the magnitude of transaction costs, and as Hanna assessed, different values among parties, and different economic valuations.

With respect to *positive* "spin-offs," the marginal social benefit of initiatives that encouraged local capacity building, training programs and business incubation in Hammerfest were originally underestimated. Discussed more thoroughly later, small investments in the community by StatoilHydro resulted in large marginal returns. The determination of local actors to pursue benefit claims, or claims to positive spin-offs from

energy development as the host community, prompted more local economic development than may have resulted otherwise.

3.3.2 Transaction Costs and Values

Coase (1960) argued that a *Pareto*-improving social contract between parties would result under the assumption of zero transaction costs. Schmid (1995) underscores the importance of transaction costs, noting that they may stand in the way of a *Pareto*-improving trade. An example might be the cost of Hammerfest fishermen self-organizing, and lost time to their fishing, and thus their income stream. If the cost of self-organization proves too great, it inhibits fishermen from organizing a bid for property rights to the Barents Sea floor.

Schmid (1995) notes two more important concepts with respect to transaction costs that CSR might address. First, "institutional innovations" might reduce transaction costs, making both parties better off. Citing North (1990), Schmid asserts that innovations reducing transaction costs are a "source of economic growth because of wealth-enhancing trade." For now, it will simply be suggested that CSR could indeed be such an institutional innovation, at least in certain respects. Secondly, he notes that, "what appears to be *Pareto*-better trade between two parties may not be if more parties are relevant" (1995:48). In Hammerfest, of course, multiple stakeholders consider the impacts from Snøhvit differently, and are therefore damaged differently. Schmid notes that, "rights determine who can participate in decision making." Therefore, assigning rights to one party or another risks excluding third parties, like the Sámi potentially.

What is not discussed by Schmid is addressed briefly by Hanna (2001): *different value systems* – both cultural preferences and economic non-market valuations - affect the degree of harm that parties experience from externalities, thus shifting the marginal benefit or marginal damage function curves, resulting in different "socially optimal" equilibria for different parties.

In Hammerfest, pollution to the atmosphere from CO_2, NO_x, or to the "viewshed," may be largely acceptable to local suppliers or subcontractors who prefer the additional revenue from industrial development. These are values derived from "direct uses" that are easy to quantify. The Sámi, on the other hand might consider both direct use values (from healthy reindeer sold on the market) or indirect values (from the service flows of a clean atmosphere). The environmental NGOs, in addition, represent constituents that might have option values (for future, yet unknown flows from the marine environment) or existence values (based on the aesthetic or spiritual value of a resource, and intergenerational equity). In other words, each stakeholder's equilibrium, as represented in the graphs, will be different. How the community, encompassing all of these stakeholders, as a whole adjusts under CSR is also important.

These different values can influence the shape of an industry cost-benefit analysis. CSR, by incorporating stakeholder input, can better account for the different values, and therefore the social costs and social benefits accruing to different stakeholders affected by Snøhvit development. The result is a more robust cost-benefit analysis that more efficiently internalizes externalities (Portney 2005). This premise, however, also hinges

on discount rates, or how much a firm, or stakeholder, values future costs and benefits in the present day.

Industry typically discounts a project at a higher rate than a stakeholder because it prefers to accrue benefits sooner rather than later. Discounting the future more means reducing the value of the future. If industry raises is discount rate, the value of the future becomes unimportant more quickly (Kahn 2005). Industry will vary its discount rate as it considers capital investments, price changes in the future and other changes that might impact its project. This has important implications for cost-benefit analyses, and presents one conflict between stakeholders and industry when considering social costs. A stakeholder might discount the future much less when she considers future generations, or even livelihood, or traditional practices in her lifetime.

Industry, and its accountants, might be more reticent to embrace CSR initially, at least from a traditional cost/benefit perspective. The expected benefits of CSR might be realized sometime in the future, while costs are incurred immediately. Costs will also differ with respect to the nature of CSR policy. Investments in technology include the risks of malfunctions and retooling. On the other hand, CSR and stakeholder outreach might limit the risk of lawsuits, and increase the likelihood of social license to operate with respect to policy adversaries, local governments or host communities like Hammerfest. In the Barents Sea, future development largely hinges on the success of Snøhvit and stakeholder buy-in. For StatoilHydro, this means that investment in CSR is potentially more rewarding than it is costly. For stakeholders, CSR presents an

opportunity for their preferences to be accounted for in a more thorough cost-benefit analysis than previously possible.

4 The Political Economy of Norwegian Oil and Gas

4.1 StatoilHydro and the Norwegian Petroleum Experience

After the original *Ekofisk* discovery in 1969, a series of important oil discoveries followed that heralded the beginning of Norway's "oil and gas adventure." This also ushered forward Norway's elevation from a sleepy, agrarian economy, to a petroleum supplier of global importance.

Statoil[10], originally called *Den Norsk Stats Oljeseleskap A.S.*, was created in 1972 in order to assure a pivotal Norwegian role in developing the proven and recoverable reserves of the Norwegian Continental Shelf (NCS). Statoil's role was supported by a state-backed policy that guaranteed the firm a 50 percent controlling stake in each production license granted on the NCS, stimulating a speedy coming-of-age for Statoil.

In 1985, the *Storting* (Norwegian Parliament) changed the rules regarding state participation in Statoil. Two relationships emerged. One continued to link the state and the company directly while the other resulted in the State's Direct Financial Interest (SDFI). The SDFI represents a state share of ownership in different interests, from oil fields to pipelines and onshore facilities. Like other owners, the State both invests in each project and shares in the costs. In return, it receives a corresponding share of the income.

[10] Statoil is now StatoilHydro - the result of a 2007 merger between Norsk Hydro's oil and gas division and Statoil – the largely state-owned oil and gas company. The merger took place while research was underway for this project, but Snøhvit itself was developed by Statoil and other minor partners, and many of the developments in CSR and corporate policy took place when Barents Sea operations were conducted by Statoil. For this reason, many descriptions, and much of the industry history and data presented here refer only to Statoil. When discussing future developments or contemporary policy, including conclusions, the operator is identified as StatoilHydro.

In 2001, the Storting agreed to sell 21.5 percent of its SDFI holdings, selling 15 percent to Statoil itself, and moving towards a semi-privatization of the oil company. The State continues to control a 70 percent stake in StatoilHydro, however, and avows to be a "long-term and stable owner."[11] StatoilHydro is now listed on the Oslo and New York stock exchanges and competes equally with other multinationals for licenses on the NCS.

Statoil, along with successful discoveries and increased production throughout the NCS, has catapulted Norway into a "Nordic Emirate" – deriving huge revenues and generating wealth for the State. In 2006, the country ranked as the tenth largest oil producer and fifth largest exporter. Additionally, it was the world's fifth largest gas producer, and third largest gas exporter. In the same year, the petroleum sector was credited with NOK 509 Billion in exports (approximately 100 Billion USD, or fifteen times higher than the export value of fish). Petroleum constituted 26 percent of Norway's "added value," 25 percent of its GDP, 36 percent of state revenues, and 51 percent of total revenues.[12] Statoil simultaneously reported declining oil production as well - a trend in the North Sea that worries some, but gas production has so far offset this fall.[13]

The SDFI, or "petroleum fund", is managed to achieve the "highest possible revenues for the government." It was estimated to be worth NOK 875 Billion (~175 Billion USD) at the beginning of 2006. It provides a large portion of government revenues from the oil sector, while tax rates as great as 70 percent provide additional

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[11] Ministry of Petroleum and Energy, "Ownership Policy," http://www.regjeringen.no/en/dep/oed/Subject/State-participation-in-the-petroleum-sec/Ownership-policy-2.html?id=445750 (accessed 06.22.2008)

[12] Ministry of Petroleum and Energy. "Norway's Oil and Gas Resources," http://www.regjeringen.no/en/dep/oed/Subject/Oil-and-Gas/Norways-oil-and-gas-resources.html?id=443528 (accessed 06.15.2008) and Statoil's *Facts 2007*.

[13] Statoil. *Facts 2007*.

revenue. In spite of decreased production on the NCS in recent years, a combination of dividends, taxes, and cash flow from a flush SDFI resulted in earnings of NOK 356 billion, or NOK 80,000 for every citizen (~70 Billion USD, and 16,000 USD per person), *just this year*.[14]

4.2 Oil and Gas Policy: A Matrix of Regimes

In Norway, oil and gas activity and its oversight is the responsibility of a matrix of state, regional, and international regimes. With respect to the environment and human safety, these regimes employ a number of different policies to promote a "clean" oil and gas industry. Taxes are one such measure, while command-and-control regulation, and weaker "guidelines," round out the rest. This section attempts to elucidate the roles of different institutions, while considering their effectiveness at promoting environmental protection. It shall consider what role CSR might play in addressing institutional shortcomings to adequately protect the environment, or communities, from harm.

4.2.1 State Regulatory Regimes in Norway

Statoil and its activities are subject to regulation by the Ministry of Petroleum and Energy, its Petroleum Directorate, and the Petroleum Safety Authority (PSA). The PSA considers the health and safety of workers, as well as the natural environment. The Ministry of the Environment also oversees petroleum activity through the Norwegian Pollution Control Authority (SFT). The SFT monitors air and water quality, including

[14] Ministry of Petroleum and Energy. "Increased Value Creation on the Norwegian Continental Shelf," http://www.regjeringen.no/en/dep/oed/Press-Center/Press-releases/2008/increased-value-creation-on-the-norwegia.html?id=511255 (accessed 06.20.2008)

emissions from the petroleum sector, and environmental impacts from activities on the NCS (Table 4.1).

Parliament enacted a carbon tax in 1990, and it continues to influence production in Norway, leading to carbon capture and storage (CCS) facilities at two drill sites – Snøhvit and Ormen Lange further south. Other drill sites in the North Sea are considering land-based power sources connected to offshore rigs by cable. This is an effort to reduce emissions from oil and gas burning that produces power *in situ*. Norway is still in non-compliance with its Kyoto obligations – responsible for CO_2 emissions 11% above 1990 levels in 2005.[15] StatoilHydro claims that Norway is the world's "cleanest" oil producer, with emissions per produced oil equivalent being only a third of the global average.[16] The Ministry of Petroleum and Energy dampens the enthusiasm, noting that, "the reduction in CO_2 emissions per produced oil equivalent has, however, not been significant enough to counterbalance the increase in energy consumption due to increased activity on the NCS."[17] It added that, "we have seen a slight increase in emissions per unit the recent years," thanks to ageing oil fields that require more energy.[18]

The conflicting roles of the state – directly profiting from oil and gas production, promoting its expansion in an era of declining production, and simultaneously regulating the industry – raises questions about the ability of the state to accomplish both missions. Norway is nonetheless characterized by a high degree of transparency and dedication to

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[15] *Aftenposten*, "Norway Failing to Meet Kyoto Goals," September 7, 2005. http://www.aftenposten.no/english/local/article1110449.ece (accessed 9.26.2008)
[16] *StatoilHydro.* "Going North: Sustainable Development 2007." *StatoilHydro*, p. 12
[17] Ministry of Petroleum and Energy, "Emissions to Air from the Petroleum Sector." Minster of Petroleum and Energy. http://www.regjeringen.no/en/dep/oed/Subject/Carbon-capture-and-storage/emissions-to-air-from-the-petroleum-sect.html?id=443519 (accessed 8.10.2008)
[18] Ibid.

the rule of law. It ranked number 14th in Transparency International's Corruption Perception Index in 2008, indicating that it is among the *least* corrupt countries in the world.[19]

Table 4.1 Regulatory Framework for Oil and Gas and Responsibilities

	Ministry of Petroleum and Energy		**Ministry of the Environment**
	Petroleum Directorate	***Petroleum Safety Authority (SFA)***	***Pollution Control Authority (SFT)***
Mission	*"In resource management there is an emphasis on cost-effective exploration and production, cost-effective utilization of the infrastructure and coordination across production licenses."*	*"The PSA is a central standard-setter for the design of technology, operations and management of the petroleum activities on land and offshore."*	Environmental monitoring according to the Norwegian Regulations relating to the Execution of Activities in Petroleum Enterprises (the Activity Regulations).
Principal Activities	Collects the CO_2 tax from the Norwegian shelf.	Aims at *preventative* management and design	Monitors seabed in a region (there are 11 regions) every third year.
	Conducts metering audits and collects fees from the petroleum activities.	Focuses on the health, safety, and environment of a workforce.	Assesses damage from heavy metals and documents biodiversity.
	"…bears national responsibility for the availability of data and information from the petroleum activities."	Aims to reduce workplace accidents and fatalities	Independent experts review reports

(sources: *www.npd.no, www.sft.no, and http://www.npd.no/English/Aktuelt/Nyheter/fakta_om_petroleumstilsynet.htm*)

Though agencies operate independently, conflicts and unbalanced outcomes are inevitable. The opening of the Barents Sea represents a set back for environmentalists, for example, but a grand opportunity for industry and its supporters in government. The SFT,

[19] Transparency International. "Corruption Perceptions Index, 2008 http://www.transparency.org/policy_research/surveys_indices/cpi/2008 (accessed 9.24.2008). Norway compares unfavorably to its Nordic neighbors, however, which all rank in the top seven (including Iceland).

meanwhile, is relegated to reacting to the nature of petroleum development, versus helping steer its direction. This phenomenon is not unique to Norway, of course, as recent events in natural gas development throughout the Western United States demonstrates. In this instance, a highly developed rule of law was circumvented, and corruption pervaded Federal agencies in charge of both oversight of, and contracts for, natural gas wells in the Rocky Mountain States.[20]

Lastly, what Table 4.1 indicates is the absence of a regulatory framework for stakeholders harmed by oil and gas production in Norway. This is instead handled by the judiciary system, like elsewhere, and recent victories by fishermen in Vesterålen and Lofoten demonstrate that, in spite of asymmetries in power, stakeholders can challenge oil and gas production in Norway. These were contentious victories, however, and pressure to drill in these areas is increasing. CSR, as discussed, could complement the above framework, with specific attention to marginalized stakeholders, and by preempting legal discord. Where regulatory agencies are inadequate in protecting stakeholders from externalities (or in promoting positive externalities), CSR might provide additional safeguards for communities.

4.2.2 International Regimes for Oil and Gas in the Barents Sea

Norway is also bound by international regulations including the United Nations Law of the Sea Convention (LOSC) and The Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSPAR). In addition, Norway currently chairs

[20] Savage, Charlie, "Sex, Drug Use and Graft Cited in Interior Department," *New York Times*. http://www.nytimes.com/2008/09/11/washington/11royalty.html?_r=1&scp=1&sq=dept%20of%20interior%20scandal&st=cse&oref=slogin (accessed 9.24.2008)

the Arctic Council – an institution with regular publications regarding oil and gas in the Arctic, the environment, and community well-being. Nonetheless these appear to have little influence on the scope of development within Norway.

4.2.2.3 *Law of the Sea Convention*

LOSC provides little in the way of environmental regulation regarding offshore oil and gas development for current development in the Barents Sea. Each state has an obligation to protect the environment under the treaty. Each state also has a right, however, to exploit its resources as it sees fit, and to interpret what level of pollution control is adequate.

4.2.2.2 *OSPAR Convention*

The Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSPAR) is a regional multilateral agreement among Western European states.[21] It essentially combined the earlier Oslo and Paris Conventions and went into force in 1998; although in many respects it was operational as early as 1992.[22] This format is much more specific than LOSC, and tackles sources of pollution directly with binding agreements.

By definition, and unlike in LOSC, OSPAR makes protection of the marine environment paramount in its goals. Developed shortly after the 1992 Rio Earth Summit,

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[21] Belgium, Denmark, EC, Finland, France, Germany, Iceland, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom, and Luxembourg and Switzerland as well.

[22] The Oslo Convention was the Prevention of Pollution by Dumping from Ships and Aircraft signed in Oslo in 1972. In 1974, the Paris Convention for the Prevention of Marine Pollution from Land Based Sources was put into force. They merged by 1992, and operated as one entity even before being officially ratified in March 1998.

OSPAR specifically evokes the precautionary principle, the polluter pays principle, and the concepts of Best Available Practice (BAP) and Best Environmental Practice (BEP). Article 5 and Annex III, in particular, consider "Pollution from Offshore Sources."

As a result of its offshore oil and gas industry strategy, OSPAR-members have agreed to dozens of "recommendations," as well as "binding" decisions. These decisions affect the use and discharge of different cutting fluids, produced water, condensate, and emissions standards. It has also implemented studies regarding an array of environmental impacts by offshore oil and gas operations, made inventories of offshore installations, and issued reports regarding these issues for public and private consumption.

From the list of decisions and recommendations on the OSPAR website, it becomes apparent that recommendations far outnumber binding decisions.[23] More importantly, OSPAR does not recognize specific stakeholders or address onshore implications. It has not permeated the dialogue in Hammerfest, and is not cited by StatoilHydro in its reports.

4.2.2.3 *Arctic Council*

The Arctic Council explicitly addresses oil and gas through its different working groups like PAME - the working group for the Protection of the Arctic Marine Environment. PAME was established in 1993. It was created with a mandate to "address

[23] *OSPAR Commission*, "Decisions, Recommendations, and Other Agreements Relating to the Offshore Oil and Gas Industry Strategy, OSPAR Commission. http://www.ospar.org/eng/html/welcome.html (accessed 31 March 2007)

policy and non-emergency pollution prevention and control measures related to the protection of the Arctic marine environment from both land and sea-based activities."[24]

Most important in the context of oil and gas are the Arctic Offshore Oil and Gas Guidelines released in June 1997, updated in 2002, and again in 2008. These are intended to create a universal standard for regulation concerning offshore oil and gas development, but are also aimed at the industry itself. Section 1.2 states that, "while recognizing the nonbinding nature of these Guidelines, they are intended to encourage the highest standards currently available."

The Guidelines evoke a number of principles common to international environmental law: the precautionary principle, the polluter pays principle, best available technology, and best environmental practices. Several sections of the Guidelines are dedicated to environmental practices, including "Environmental Impact Assessments," "Safety and Environmental Management" and "Environmental Monitoring" (AEPS 1997). The document also devotes a section to "Arctic People, Sustainability, and Conservation of Arctic Flora and Fauna." It concludes, notably, with a section on "Operating Practices" with clearly indicated procedural suggestions for more environmentally-friendly operation.

The Arctic Council, however, is essentially decorative in terms of policy implementation. Offerdal notes that the Arctic Council is an organization "with a relatively low degree of formalization" (2007: 141). While there is formality regarding membership and decision making, "once the decisions have been made, there are few

[24] *PAME*, "Home Page," PAME. http://arcticportal.org/en/pame/ (accessed 15 March 2007)

regulations on how they are to be followed up" (Offerdal 2007: 141). Young agrees and notes that, "the result is an ad hoc process that is slow and can yield unsatisfactory results" (1998: 178-179). Neither the Arctic Council, PAME, nor its Oil and Gas Guidelines have influenced Hammerfest development, stakeholders, or industry players like StatoilHydro.

To summarize, there are a number of overlapping regimes that govern offshore oil and gas development in Norway. They represent the spectrum of enforceability and influence. Domestic legal regimes are most relevant, while the Arctic Council "guidelines" make little impact. None of the regimes specify human and community impacts beyond an environmental perspective and StatoilHydro does not recognize OSPAR or Arctic Council guidelines in its sustainability reports.[25] With these shortcomings in mind, but recognizing the relative "success" of Norwegian institutions with respect to oil and gas regulation, we may look to CSR to fill in regulatory, institutional, and market "gaps," creating *Pareto*-improving opportunities at the margin for different stakeholders.

4.3 Snøhvit, Hammerfest, and a "New Arctic Petroleum Province"

Snøhvit is symbolic of a push for Artic resource exploration and development. During its development, Statoil faced unprecedented opposition from environmentalists, skeptical fishermen, and a wary native population. It also faced new technological hurdles that were insurmountable only a decade ago. As mentioned earlier, Snøhvit reverses the long-standing closure of the Barents Sea to oil and gas drilling – enacted

[25] Their insignificance was underscored in interviews with a former Statoil executive (5.6.2008)

partly out of concern for the fragile environment, and partly to avoid a disaster like "Exxon Valdez," when an entire fishing industry was crushed by a catastrophic oil spill.

Decades after its discovery, North Sea oil deposits are clearly in decline - a phenomenon StatoilHydro readily admits.[26] In fact, global petroleum resources are increasingly scarce, and exploration has migrated to both politically and geographically challenging territory. StatoilHydro, now an industry leader in offshore development, and with a laudable environmental record among oil and gas companies, has openly staked its future on development in the Arctic regions (even calling its 2007 Sustainability Report "Heading North"). Besides the Barents Sea, StatoilHydro has continued to push its own boundaries, securing prospects in the Chukchi Sea between Alaska and Russia, the North Atlantic near Nova Scotia, and oil sands in Alberta. It continues to operate in Algeria and maintains a stake in the BTC pipeline traversing Azerbaijan, Georgia and Turkey.

Statoil's efforts coincided with a new push by the Norwegian central government to develop its "High North," and the county of Finnmark in particular - a region long frustrated by a perceived neglect on the part of a southern-dominated government in faraway Oslo. The Jens Stoltenberg government, however, enacted a "High North Strategy" with a renewed interest in the region's economic development. Pivotal to the strategy was increased oil and gas development, and cooperation with Russia's northwest regions – including its oil and gas sector.

Concurrently, Russia was contemplating its recent discovery in the Russian Barents Sea – the Shtockman gas field – the world's largest undeveloped gas field at 3.8

[26] *Statoil*. "FACTS 2007," (p. 8)

trillion cubic meters of gas (and 37 million tons of condensate). Shtockman is also in deep water (~320 meters) and well offshore (~600 kilometers). While Gazprom – the Russian energy giant and closely linked with Russian government elite - entertained its options, StatoilHydro joined a cadre of eager producers in intense negotiations concerning Statoil's future role in Shtockman.

These discussions sometimes included state level, bi-lateral negotiations between Stoltenberg and then-Russian President Vladimir Putin. After all, it was perceived by politicians and public alike in Norway, Gazprom lacked the resources and technology to securely tap Shtockman gas (Jensen 2007). While a further examination of this relationship is beyond the scope of this paper, it should be noted that the lure of a potentially lucrative agreement between StatoilHydro and Gazprom presents another motivation – potentially the most important motivating factor - for developing Snøhvit.[27]

[27] Interview at the Ministry of Foreign Affairs, Oslo (06.22.2007) and with a former Statoil Chief Executive (05.06.2008)

5 Methodology

Stakeholders for this case study were chosen for their geographical proximity to Snøhvit, their perceived risks, and their vulnerability to negative externalities.[28] The following stakeholders correspond to the definition of critical stakeholders discussed in the following chapter, though their relevance within the case study varies. They include:

- *The Coastal Sámi*
- *Barents Sea Fishermen (The Hammerfest fleet in particular)*
- *Hammerfest Municipality and Business Community*
- *Environmental Civil Society (NGOs Bellona and WWF Norway)*

Each stakeholder group, it should be noted, is a multifaceted community, and differing opinions exist among members of the same stakeholder group. Currently, for example, fishermen in the Lofoten and Vesterålen regions of Norway are engaged in a contentious dispute with StatoilHydro regarding the safety of seismic exploration, while relations in Hammerfest remain relatively harmonious.

Similarly, the Sámi continue to be divided in opinion regarding their relationship with the Norwegian energy firm. All attempts were made to collect as many different viewpoints as possible, from as wide and varied a source as possible. These attempts brought the author to the Norwegian Foreign Affairs office in Oslo, universities in Tromsø, and fishing boats in Hammerfest. In between, the author traveled any

[28] StatoilHydro asserts that "stakeholders play an increasingly important role in influencing the scope and focus of (our) sustainability reporting." In its 2007 sustainability report, it notes further that, "stakeholders relevant to our operations include governments, partners, suppliers, investors and shareholders, customers, employees and unions, civil society and local communities." This is a comprehensive definition. It also legitimizes the stakeholders identified in this project, but is broader in scope than this project intends.

combination of trains, boats, prop planes, jets, and buses, visiting important towns in Finnmark including Alta (the largest town), Vadsø (where the regional government sits) and Kirkenes (where the Barents Secretariat is headquartered). The author found himself tenting under a ski jump in Vadsø, and was awoken by grazing reindeer in Hammerfest. In spite of these efforts, all viewpoints cannot be captured, and this is one constraint on the presented results.

Evidence itself was collected through 35 semi-structured interviews, plus additional informal conversations and follow-up dialogues that took place between 2007 and 2008 with local stakeholders (fishermen, small business/local government, Sámi, and environmental NGOs), government officials at the local and national level, Norwegian journalists, and with industry representatives in Hammerfest and in Stavanger (StatoilHydro's headquarters).

The research is complimented by content analysis of sustainability reports, official releases and websites from Statoil/StatoilHydro, WWF Norway, Bellona, the Sámi Parliament, Sámi University College, and journalistic accounts of petroleum development in the Barents Sea. Appendix A includes a list of the different interviewees and/or the institution or stakeholder they represented.

6 Results

6.1 Problematisation and Intressement*:* Statoil Makes its CSR Case

Actor Network Theory (ANT) defines *problematisation* as an initial stage during which the focal actor (StatoilHydro in this study) defines CSR in a local context. *Intressement* naturally ensues when the focal actor attempts to gain acceptance among stakeholders.

The potential for large-scale oil and gas development in the Barents Sea politicized much of the Norwegian populace. Many were instantly skeptical of the merit of such prospects, while inhabitants in the North recognized the potential for prosperity like that which had taken place in other parts of the country.[29] In the many intervening years between Snøhvit's development and final approval, a colorful discourse evolved. Statoil, and sometimes the central government itself, generated much of this. As has been noted earlier, an "Arctic Energy Province" concept was propagated by the Stoltenberg government, coupled with its "High North Strategy." These slogans clearly played to the poor economic situation in Hammerfest, and to the feeling of desperation amongst its dwindling citizenry.[30]

Statoil pursued a more unorthodox approach during the *early* problematisation stage. Leif Christian Jensen (2007) rigorously detailed the evolution of industry's paradoxical "drill for the environment" stance during the Snøhvit debate. Statoil

[29] Confirmed in many interviews across a broad spectrum of stakeholders and observers including local politicians, Sámi, Fishermen, environmental NGOs and local observers including journalists.
[30] Ibid.

effectively argued that the imminent "threat" of presumed-irresponsible Russian drilling in the Barents Sea necessitated Statoil to drill first. In this manner, according to Statoil, Norwegians could set the bar high by demonstrating safe drilling measures. Though Statoil also underscored the potential economic boom to Finnmark (suggesting a potential local work force reaching 2000 individuals), it went further by subverting the most prominent, and well-organized argument in opposition to Snøhvit; that drilling is *harmful* to the environment (Jensen 2007). This tactic, however, only put Statoil at loggerheads with environmental NGOs like "Nature and Youth," Bellona, and WWF Norway. Persistent opposition forced Statoil to reconsider its approach, and its first stakeholder outreach initiatives genuinely emerged, and its CSR policies coalesced.

Across the spectrum of stakeholders already identified then, the principle CSR policies that Statoil endorsed, and now StatoilHydro support, are:

- ***Stakeholder Dialogue.*** Maintaining open flows of communication between the stakeholder and industry. The corporation recognizes Governments, Partners, Suppliers, and Investors and Shareholders as *stakeholders*. StatoilHydro cites specific global institutions like Extractive Industries Transparency Initiative (EITI), Voluntary Principles on Security and Human Rights, and the World Economic Forum's Partnering Against Corruption Initiative. It is also a member of the World Business Council for Sustainable Development.

- ***Local Development.*** Generating positive "ripple effects" for the community, principally in terms of local business development, specialized training, employment, and community development. Its website reads that, "We promote local sourcing and work with local businesses as suppliers and contractors where they exist, and invest in developing sustainable and competitive local enterprises."[31]

- ***Environmental Best Practices.*** Employing technological innovations and revising industrial practices to minimize, or erase emissions of CO_2, NO_x, and other gaseous emissions, as well as lubricants, hydraulic fluid, drill cuttings, waste water.

[31] StatoilHydro. "Financial Performance, generating spin-offs and local content," www.statoilhydro.com/en/EnvironmentSociety/Sustainability (accessed 6.11.2008)

StatoilHydro touts a “zero harmful emissions” goal, and is developing an “environmental impact factor” to measure emissions.

6.2 Stakeholder Outcomes: Hammerfest Fishing Community

Sverre Kojedal, the managing director of Snøhvit who is based full-time in Hammerfest, asserted that, "without the agreement of fishermen, there would be no development."[32] This claim is being put to the test in the Lofoten Islands, where fishermen have staged significant protests in opposition to exploratory drilling. So far, the fishermen have succeeded, and exploration is halted for the time being. Both the Lofoten example and Mr. Kojedal's statement confirm the significance of fishermen as stakeholders. They are identified with Finnmark, and their success or struggles have dictated the fate of coastal Finnmark and its communities.

Fishing had faired poorly in the last decade. Local fishermen felt under threat from larger, more industrial ships based in southern Norway, while a lingering boundary dispute with Russia added uncertainty, and Russian trawlers put additional pressure on resources. Hammerfest's population had been declining steadily over the last decade. Accordingly, new homes, home prices, and young families were also in decline. Young people were not optimistic about their opportunities in the community, and new business investment was stagnant.[33]

In spite of the documented risks of petroleum development to fisheries, the Hammerfest fishing community endeavored to be open-minded; but they were also prepared to make overt demands from Statoil regarding specific aspects of

[32] Interviews in Hammerfest: 6.22.2007, and 7.02.2008
[33] Angell et al. *Rapport 2006:6, Samsfunnsvirkninger Fra Første Feltutbygging I Barentshavet*, Norut NIBR (2006).

development.[34] They were dismayed with the prolonged economic contraction of their community, and of the fishing industry itself.[35] "Who knows, maybe my kid will want to work at Snøhvit in the future," an officer in the Hammerfest fishing union wrote[36]. The Hammerfest Fishing Union's leader welcomed the prospect of new opportunities for young people in Hammerfest. "But," he was sure to add, "we have to be sure that they don't run over us."[37]

6.2.1 Risk and Reward in the Barents Sea

What risks did Snøhvit pose to Hammerfest fishermen? What were the externalities? This section begins to address these questions, while the question of magnitude is addressed further in Section 6.3

Specific risks resulted from negative externalities that originated from issues of public goods and open access resources. Damage from a hypothetical oil spill in the Barents Sea was perhaps the most obvious danger. Statoil rather quickly dismissed this risk because it was drilling for natural gas, and prospects of a Norwegian *Exxon Valdez* disaster were therefore impossible. The company did explore oil production in the Barents, from Snøhvit wells, but only after the LNG facility was in place and StatoilHydro was well entrenched in Hammerfest.[38] Ironically, this did not engender much local backlash, but instead created greater economic optimism.[39]

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[34] Interviews and phone conversation with fishing union representatives in Hammerfest and Trondheim, July 2007 and 2008.
[35] Interviews in Hammerfest: July 2007 and July 2008
[36] Email correspondence May 2008
[37] Email correspondence 6.21.2008
[38] Italian energy company ENI is continuing to develop its *Goliat* oil field, very close to Snøhvit, so the risk of an oil spill still exists.
[39] Interviews with Snøhvit observers and stakeholders (summer 2007 and 2008)

Other risks to the environment persisted. Contaminated water, hydraulic fluids and "drill cuttings" (or the contaminated debris from drilling) could disrupt fishing grounds. Even before drilling begins, seismic exploration is potentially harmful, although that is debatable. Other environmental risks included debris from increased shipping, like bilge water discharge, and waste from platforms. Gas flaring and CO_2 emissions were environmental concerns, but less so for fishermen.

Perhaps most potentially injurious for fishermen, and therefore of most concern, was restricted access to fishing grounds. The fishermen reiterated on several occasions that what they feared most before Snøhvit's development was losing access to fishing grounds because of platforms, infrastructure, or regulation.[40]

Positive externalities are more universally shared. In the face of severe community decline and depression, fishermen were eager to see economic development that would benefit their children and quality of life.

6.2.2 CSR Applied

Statoil preempted confrontation with fishermen early, by designing Snøhvit with modern technology that included innovative undersea platforms that were "overtrawlable." Statoil was well aware that even the opportunity to drill in the Barents, in some ways meant going to new extremes – technologically, and with respect to its stakeholders.[41] The modern undersea rigs were a positive first step, but issues remained. Within the greater and ongoing debate, two incidents are particularly descriptive of CSR

[40] Interviews in Hammerfest, July 2008.
[41] These undersea rigs have widespread industry applications, and should not be taken as a CSR event specifically designed for Hammerfest stakeholders only.

in practice, and their resolution provides the most insight into operational CSR with respect to stakeholders in Hammerfest.

The Pipeline Debate

In 2002, Statoil publicly released details of its plan for the undersea pipeline, traveling from Snøhvit's undersea wells to its LNG processing plant on Melkøya (an island immediately offshore from Hammerfest). In the opinion of fishermen, the proposed path crossed especially productive fishing grounds, including spawning grounds for Atlantic Cod. This sparked alarm among fishermen. It was not clear what claim fishermen had to the area, however, other than historic use and local knowledge of its significance.

Statoil engaged in debate with the fishermen in semi-formal settings in Hammerfest. The fishermen had organized enough to present unified, grassroots opposition to the proposed pipeline path. Ultimately, Statoil altered the course of its pipeline at additional cost, defusing the conflict quickly.

Ship Traffic Near Melkøya

In this debate, the fishermen again confronted Statoil after the firm closed a narrow passage between Melkøya and the greater island of Kvaløya. While the overall diversion it created for fishermen was small, the protests were nonetheless met openly, and the passage was reopened for commercial fishing traffic.

In this instance, the fishermen bristled at the proposed loss of access, and restrictions on their operation. The overall diversion for fishermen was quite small – an inconvenience in most respects. But they went into the Snøhvit debate with a few principles that were of symbolic importance and dear to them. Issues of access and restriction remain particularly emotive. Closing the passage threatened the order of things, and gave the appearance that the large oil company was dictating terms to local fishermen. This, in turn, was resisted vehemently.

6.2.3 Analysis

While the fishermen rather easily entered the enrolment stage of ANT, accepting Statoil's new presence in Hammerfest, the process was not without conflict. These conflicts were minimized by early dialogue and continued communication between industry and the local stakeholder.

CSR provided a conduit for communication between industry and the stakeholder, and has since formalized the level of self-organization achieved by local fishermen. It also resolved a potentially serious conflict over public goods with ambiguous property rights. The resolution resulted from informal structures and occurred outside of the courtrooms, resulting in mitigated externalities through potentially efficient means.

6.3 Stakeholder Outcomes: Coastal Sámi

The Sámi are the indigenous inhabitants of northern Europe, living throughout northern Russia, Finland, Sweden and Norway. The largest numbers are located in Norway, where reindeer husbandry remains the bedrock of their economy. Norway

recognized the Sámi as an “indigenous peoples” by adopting the ILO convention number 169 concerning “Indigenous and Tribal Peoples in Independent Countries.” The Sámi of Kvaløya (the large island on which Hammerfest is located), seasonally herd reindeer and are referred to as the “Coastal Sámi.” They are differentiated from the interior Sámi, but are awarded the same rights as other Sámi under the Norwegian Constitution, Finnmark Act, and Sámi Parliament.

In 2005, the Norwegian Parliament passed the Finnmark Act. This transferred approximately 95 percent of the land and water throughout the vast tundra and grazing lands in Finmark County from the central government to the inhabitants of Finnmark. The decisions was based on recognition that, "the Sámi, through protracted traditional use of the land and water areas, have acquired individual and/or collective ownership and right to use lands and waters in Finnmark County." The Finnmark Estate Agency manages the land. Its board of directors – half appointed by the Sámi Parliament and half appointed by the Finnmark County Council – handles property disputes and conflicts between reindeer herders and other land users (usually non-Sámi Europeans). No legislation provides the Sámi any rights with regards to offshore resources like oil and gas in the Barents Sea. Nor is there any legal recourse for demanding compensation or royalties for the exploitation of these resources.

The Sámi have proven themselves adept at self-organization and negotiation, giving them a capacity to pursue their interests through Norway’s liberal political institutions and social democratic policies that exceed many other northern indigenous groups. But this is not to suggest that everything is perfect.

In Finnmark, relations between Sámi and Norwegians remain contentious. The Alta Controversy (1978-1982) in which Sámi protesting the building of a dam were forcibly dispersed, has left lasting scars. Many Norwegians interviewed for this study expressed exasperation with the Sámi, their ubiquitous reindeer, and what they view as excessive state protection and property rights for the Sámi in Finnmark. Perhaps most symbolic of the "annoyance" is a new fence that rings Hammerfest, built to keep reindeer out of the village proper. It did not work, since spring snowdrifts allowed reindeer to easily cross. A prominent Sámi Parliamentarian called it "illegal", and compared it to the Israeli wall around the West Bank.[42] This might be hyperbole, but it nonetheless demonstrates the differing perspectives between European-Norwegians and their Sámi counterparts.

6.3.1 Risk Assessment

The Sámi's greatest threat is generated by increased industrial activity onshore that encroaches on herding grounds (Eythórasson 2003; Vistnes 2008).[43] These threats can arise from power lines that deliver energy to offshore installations and onshore processing facilities, but also from "greener" industries including windmills and their service roads.

The Sámi, who are extremely well-organized and endowed with a higher degree of political power than other circumpolar indigenous groups, have kept a very low profile with respect to Barents Sea development in many respects.[44] Disputed royalty claims, low

[42] Interview, 6.2007
[43] Interview with local journalist and local Sámi (2007 and 2008).
[44] Interview with long-time Hammerfest journalist (07.02.2008)

participation in the development process, and impermanence in the local community, combine to erode the legitimacy of Sámi as *primary* stakeholders, at least as viewed by industry and other stakeholders. In other words, Sámi have arguably less claim, or influence, as local stakeholders than other groups, such as the fishermen.

Sámi are not free from risk from Snøhvit negative externalities, but they are in less direct conflict than groups like the fishermen in some sense. Air and water pollution are important to the Sámi, but issues like climate change are less tangible, and therefore not of immediate concern. Ultimately, it is regional economic development, bringing more traffic, industry, installations, and *hyttes* (small, family getaway cabins popular in Norway) that pose the greatest risk to reindeer husbandry, which is the essence of Sámi livelihood *and* culture.[45]

6.3.2 CSR Outcomes

Sámi input regarding StatoilHydro remains mixed, with some local herders and Sámi parliament members reporting a positive relationship, and others remaining less enthusiastic about the nature of their dialogue with the industry[46]

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[45] A new report (Vistnes et al. 2008) regarding Sámi well-being in the face of *Goliat*'s development asserts that, indeed, there are great risks to area Sámi from offshore petroleum developments. As described above, most problems stem from related onshore activities, and encroachment on reindeer herding grounds. In addition, however, Sámi parliamentarians are struggling to find common ground with the Norwegian state regarding a new Minerals Act. The crux is language that recognizes their demand for Prior Informed Consent (PIC) and consultation before resource development in "Sámi areas." Another Sámi complaint is that the current draft does not compensate Sámi as mandated by ILO 169, article 15.2: *In cases in which the State retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands, governments shall establish or maintain procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced, before undertaking or permitting any programmes for the exploration or exploitation of such resources pertaining to their lands. The peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damages which they may sustain as a result of such activities.*

[46] Interviews with Sámi Parliamentarians (2007 and 2008)

One prominent Sámi herder and owner of a small Sámi restaurant in Hammerfest (a popular tourist attraction) described her relationship with StatoilHydro as largely positive, reporting that they consulted her group with regards to the potential course of power lines.[47] These lines have so far been obviated by the power supplied by Snøhvit's own gas power plant, but could yet be built with future expansions at the plant. Another herder, and the leader of a local herding district, was essentially neutral. But others in the Sámi Parliament were openly critical of StatoilHydro. They claimed that Sámi were treated with contempt by industry. Others cited anecdotal evidence suggesting a deliberate effort on the part of Statoil to avoid incorporating Sámi into the stakeholder dialogue. Among the evidence was a quote by a Statoil executive that claimed that liquor would be enough to "buy off" the Sámi.

It is clear that Sámi were not a high priority for Statoil during Snøhvit's building phase. In contrast, the Italian energy company ENI, in preparation for the development of its offshore oil field, *Goliat,* delivered an "open letter" that put Sámi in the middle of its own stakeholder policy. Interviews at ENI confirmed that Sámi perceptions and needs were essential to their own CSR policies.[48] The Sámi complaint with StatoilHydro is, in part, that they were not included more. But other more genuine threats to their economy and livelihood remain unaddressed, and future developments might tip the scale, putting Sámi more directly in conflict with development in Finnmark.

[47] Interview in Hammerfest (07.12.2008)
[48] Interview with ENI Hammerfest manager (07.01.2008)

6.3.3 Analysis

It remains unclear what marginalizes the Sámi in Hammerfest more – the Sámi themselves, industry, or a combination. The Sámi are not integrated into the Hammerfest political system, and are not directly affected by offshore, or even near-shore developments. This diminishes their role as *primary* stakeholders. At the same time, in November 2007, soot from Snøhvit covered both Hammerfest and vegetation where reindeer graze around Hammerfest. It was an embarrassing incident for StatoilHydro, and was a major news event in Norway. It has also caused serious delays in production and exports. This sort of pollution directly impacts Sámi stakeholders, but strangely not been a source of contention or uproar.[49] Meanwhile, Sámi politicians continue to demand royalties from Statoil production in the Barents Sea. From the outside, this has been viewed as "having it both ways."

The Sámi case is inconclusive with regards to CSR and externalities. The Sámi's own role is less directly affected by negative externalities. On the other hand, another group's *positive* externalities pose potential risk to Sámi reindeer herders. Statoil (and now StatoilHydro) were clearly insufficient, however, in their stakeholder outreach. Whether this was a result of the lower Sámi status related to the Snohvit project (secondary versus primary local stakeholders) or intentional avoidance, is unclear. Regardless, the perceptions of Sámi political leaders remain largely negative.

[49] During one interview, a local journalist noted that, "the typical perception is that they complain about the smallest things, so it is really strange that they were not more vocal about the soot."

6.4 Stakeholder Outcomes: Hammerfest Municipality

This section focuses on elements of Hammerfest community. It combines local business leaders and local government together as proxies for the non-Sámi (and non-fishing) citizens. Though a representative survey might be preferred, this aggregation of stakeholder groups does not negatively affect the validity of the data because of the almost uniform support for Snøhvit in the community.

As discussed already, Hammerfest, like much of Finnmark, was suffering a long-term economic skid and population decline. The prospects of large-scale employment and a revived economy were alluring for locals.

6.4.1 Risk Assessment: Local Development and Reversing Leakage

One of Statoil's greatest challenges was to address the huge expectations that Hammerfest citizens had for oil and gas and community revitalization. After all, a new "Arctic Energy Province" was being built, and it was starting in Hammerfest.

A major risk to the community, and one that has occurred elsewhere, would be localized pollution which could create increased costs for the community while the financial benefit stream flowed to corporate headquarters and investors in the south. This flow of money out of a community is referred to as "leakage." It does not result in local development and does little to stimulate economic vitality. An additional risk then was the perception of *potential* economic benefits. Expectations in the community for jobs and job creation were extremely high, perhaps unreasonably.

6.4.2 CSR Outcomes

Though success has not come easily, local actors, combined with Statoil contributions, have captured more economic benefits stemming from Snøhvit than originally thought possible. In 2002, Statoil estimated that approximately 600 million Norwegian Krone (NOK) in local contracts would be awarded for Snøhvit construction. The rest would come from more specialized suppliers from southern Norway. By the end of the construction phase in 2007, there has been as much as 3.6 Billion NOK in local contracts, or a *six-fold* discrepancy in favor of local suppliers. This is largely the result of active local organizations and a committed local government, but also Statoil contributions to local organizations intent on local capacity-building and education.

While Statoil may not have adequately contained the expectations of local retailers and citizens, it has contributed to specific programs intended to minimize economic leakage associated with Snøhvit construction. Unfortunately, detailed financial accounting was unavailable to the author but there is qualitative evidence that clearly illustrates Statoil's commitments, and government actions, that extend benefits to the wider Hammerfest community.

Petro Arctic

Petro Arctic is a supplier network "representing the interests of companies wishing to position themselves as suppliers to the development and operation of the Snøhvit LNG facility and the future expansion project in North Norway and the Barents

Sea."[50] In their own words, "The main aim of Petro Arctic is to obtain the maximum possible deliveries of goods and services from member companies to Snøhvit and future expansion projects in North Norway and the Barents Sea. This will be achieved by marketing member companies to the developers and by motivating and preparing members through participation in networking and skills development programmes." Importantly, Petro Arctic is funded directly by StatoilHydro. It includes 350 members of large, small, and medium-sized enterprises from the northernmost Norwegian counties – Troms, Nordland, and Finnmark.

Petro Arctic organizes regular meetings that bring together major suppliers, representatives of Hammerfest municipality, the local police, and StatoilHydro itself. Brief summaries are published online.[51] These meetings are centered on issues regarding local employment numbers, local offices, local training, and negative impacts stemming from exogenous labor supply like crime, housing, and rotating "offshore" work schedules.

Pro Barents AS

Pro Barents is an "industry incubator" partially owned by StatoilHydro that similarly attempts to stimulate the Northern economy, supply bases, and oil and gas competence. It also invests in new projects, including oil and gas, as well as tidewater and wind projects.

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[50] *Petro Arctic*. http://www.petroarctic.no/index.php?page_id=1236 , Petro Arctic (accessed 05.12.2008)
[51] *Petro Arctic*. http://www.petroarctic.no/index.php?page_id=3788 . Petro Arctic (accessed 07.17.2008)

Energi Campus Nord

StatoilHydro also contributes directly to Energi Campus Nord, an educational endeavor based in Hammerfest, but working in conjunction with Finnmark University College and the University of Tromsø. The principal goal is to train "high-end, knowledge-based" students from the North with expertise in engineering, physics and the sciences.[52] Oil and gas is a major component of the curriculum, but tidewater and wind energy is also important.

Property Taxes

Hammerfest citizens agreed to a property tax in order to derive a revenue stream from Melkøya – the island that Snøhvit is located on. The most recent calculations resulted in an annual collection of 19 million Euros – 4 million Euros more than the community had originally budgeted for.[53] The money is in part already allocated for infrastructure development throughout the town, as well as a new, significant cultural center with acoustics rivaling Oslo's National Theatre.

6.4.3 Analysis

It is evident that StatoilHydro has contributed on a financial level to encourage local competency and local/regional development. It also contributes time to stakeholder dialogue and feedback at meetings organized by Petro Arctic. But regional development is not an imbedded element of StatoilHydro business practice. Instead, Statoil officials

[52] Interviews: Kåre Tormod Nilsen and Lars Krogh, Energi Campus Nord (07.01.2008)
[53] *Barents Observer*, "Gas Cash Gives Prosperity" http://www.barentsobserver.com/gas-cash-gives-prosperity.4493819-16178.html (accessed 06.20.2008)

believe that property taxes should be the bedrock of corporate contributions to the community, and that other expectations on the part of host communities were unwarranted.[54] Taxes alone are purely a transfer of money to the community, and do little on their own to stimulate growth, or assure community development. Those goals become the responsibilities of local government. In many respects, the industry feels distracted and fatigued by different stakeholder demands, and wary of increasingly widespread obligations.[55] Therefore, although it may seem counter-intuitive, in the political context of Hammerfest and democratic Norway, industry may actually prefer increased taxes to increased stakeholder engagement. Taxes would simplify the role of outreach and community development on the part of industry, placing the onus of satisfying stakeholder interests squarely on government.

One area of business that Statoil did not accommodate, and may have originally *harmed* was the Hammerfest tourist industry. Claiming to be the "northernmost city in the world," Hammerfest draws an unusually robust tourist crowd that comes for midnight sun viewing, fishing, snowmobiling, and Sámi cultural tours. During the development stage of Snøhvit, Statoil reserved entire hotels for visiting dignitaries and a mobile work force. The result was a hotel room shortage that forced bus tours to skip Hammerfest on their Finnmark itinerary.[56] This seems to have abated, and Hammerfest has retained a busy summer tourist schedule.

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[54] Interviews with Sverre Kojedal, StatoilHydro (07.13.2007 and 07.02.2008)
[55] Ibid.
[56] Interviews with Knut Arne Iversen, Hammerfest Turist (07.12.2007 and 07.01.2008)

StatoilHydro admits that community *expectations* regarding the role of oil and gas in community development are still a concern. In other words, can StatoilHydro fulfill the expectation locals have of Hammerfest revitalization? Though it claims to take this seriously,[57] its rhetoric regarding an "Arctic Energy Province" suggests otherwise. Industry wants to cultivate the support of locals who support more acreage development (i.e. drilling). But since recent exploration has yielded dry wells - and after Snøhvit's own start-up problems - the company is considering how to dampen expectations.[58] Statoil originally suggested that as many as 2000 permanent jobs would be created by Snøhvit, whereas only 300 are actually in place. Therefore, managing expectations may become an important aspect of CSR that is yet to be developed: accurate assessments of community benefits and project life spans need to be communicated, and post-development preparations initiated.

6.5 Stakeholder Outcomes: Environmental NGOs

In spite of its critical role in the debate surrounding Snøhvit's development and Barents Sea oil and gas, *the environment is poorly represented by primary stakeholders*. The fishing community, the local municipality and Sámi herders all have environmental interests. The fishermen, who most directly overlap with industry in maritime resources, are the best proxy for environmental interests on a local level. With their livelihoods and resource at risk from poorly regulated oil and gas development, the fishing community lobbied Statoil directly for assurances regarding environmental best practices, including

[57] Interviews with Sverre Kojedal, StatoilHydro (07.13.2007 and 07.02.2008)
[58] Ibid.

fluid emissions. The fishing position, however, is a defensive stance to protect self-interests. While important, it is not a position that challenges industry on technical matters, or drives best-practice innovations or development. This is the role of environmental non-governmental organizations (NGO).

Three NGOs were particularly critical of Snøhvit's realization: *Natur og Ungdom* ("Nature and Youth"), WWF Norway, and Norwegian organization *Bellona*. Each lobbied in opposition to Snøhvit. Nature and Youth were particularly vocal, leading a sit-down strike in Hammerfest, while WWF engaged in talks with Statoil – each action reflecting their respective strategies.[59]

6.5.1 Risk Assessment

Much of the potential risk from oil and gas has already been mentioned – emissions from gas flaring, CO_2 emissions, pollution from ship traffic, and drill cuttings. In addition, it can be argued that NGOs like WWF are fighting for indirect values that their members share. The risks, in their opinion, do not outweigh the value of ecological services like clean air, healthy fish stocks, and a healthy community. These services are hard to quantify. Even harder are existence values. Some WWF members, based in distant parts of the world, might intrinsically value a petroleum-free Barents Sea, even if they are unable to visit and enjoy it themselves. But these value systems play little role in the Hammerfest debate.

[59] Interview with former *Natur og Ungdom* leader (08.2008)

6.5.2 CSR Outcomes

In the scant literature that positively reviews CSR, May (1999) complements Shell's model emphasizing local, primary stakeholders in combination with NGO engagement and dialogue. Statoil also communicated directly with NGOs during the contentious years before the release of the *forvaltningsplan,* or Parliament's management plan for the Barents Sea and maritime zones around the Lofoten islands.[60] Until its release there was an indefinite moratorium on oil and gas development in these waters with the exception of Snøhvit, which was approved in 2002.

WWF Norway and Bellona both take credit for the Management Plan's inception, injecting an environmental debate into the popular discourse that had been absent during North Sea production. Both acknowledge a relatively open dialogue with Statoil, particularly in regards to carbon sequestration, and both organizations recognize that Snøhvit was an important instigator that catalyzed environmental opposition and directly resulted in the Management Plan.[61] Important developments that resulted from the Management Pan include:

- A 50 kilometer coastal safety zone, within which drilling is forbidden.
- Research of Barents Sea flora and fauna and risks
- Closed areas (though open for review periodically)

Another important area that Statoil claims success in is its own campaign to reduce the emissions of toxic drill cutting fluids. While pushed by the NGOs, Statoil was not under legal obligations to develop such successful alternatives. Statoil has since been

[60] Interviews with Bellona and WWF Norway (07.03.2007 and 07.04.2007)
[61] Ibid.

recognized for its leadership in this respect. Importantly, Statoil acknowledges that the development came with "no major cost impact."[62] This is positive, of course, but underlines the low marginal costs incurred and relatively high marginal returns.

Areas of contention that persist include the lack of ballast water treatment by supply ships at Melkøya. This was a specific demand by environmentalists that appears to have been rebuffed with little explanation.[63] Another contentious point is the future development of oil. NGOs were willing to accept gas production in the Barents Sea, but were adamantly opposed to oil development because of the risk from spills. StatoilHydro has since explored for oil in and around Snøhvit, this time with little regard for NGO positions. Oil discoveries have not been economical enough to stimulate production thus far. ENI, meanwhile, is likely to develop the *Goliat* oil field nearby.

6.5.3 Analysis

Macro environmental issues remain the domain of environmental NGOs and are not pushed from a community perspective. The community employs an environmental minister, but the person holding this position gushed about Snøhvit, and appeared little concerned with specific environmental issues.[64] He described his relationship with Statoil as informal – fishing trips with Statoil executives for example. He readily dismissed the potential for social ills, and even the idea of pollution, suggesting instead that Hammerfest was reducing America's CO_2 emissions by supplying them with gas instead

[62] Vidnes, Georg, "Environmentally Friendly Production Drilling in the Barents Sea: Experiences from the Snøhvit Field Development Project 2004-2006 (Deepwater and Offshore Technologies Conference presentation. Stavanger, Norway, 2008).
[63] Interviews with Bellona and WWF Norway (07.03.2007 and 07.04.2007)
[64] Interviews with Hammerfest Kommune Environmental Advisor (07.10.2007)

of oil. With respect to "environmentalists," he argued, "if you can't beat them, join them," and insisted that strict environmental policies were already in place.[65]

An ENI spokesman summed up the local scenario more succinctly when she noted that, "the environment enters the conversation when it's convenient: 'oh yes, let's take care of the environment'…but the real impetus is economic development."[66] Indeed, the absence of a *locally-based* environmental agenda seems to have handicapped any influence on the scope of development or the concept of sustainability, and opened the door for a "development trap." For example, StatoilHydro is beginning to argue that if Hammerfest expects sustained *economic* development, then more acreage for development is necessary.[67] The last point demonstrates the continued competition between models of sustainability and economic development. CSR and stakeholder outreach, at least in Hammerfest, has not successfully melded the two.

The position of Oslo-based environmental NGOs like Bellona and WWF Norway as "outsiders" was also detrimental to their goals. Hammerfest citizens largely considered the organizations as antagonists interfering with the community's right to economic development.

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[65] Ibid.
[66] Interview with ENI spokesperson (07.01.2008)
[67] Interview, Sverre Kojedal (07.01.2008)

7 Discussion

7.1 The Influence of Standards

There are several angles from which to analyze the results of CSR and stakeholder outreach in Hammerfest, and potentially elsewhere. First, one can juxtapose relevant industry or legal standards that apply to different stakeholders with stakeholder concerns. As already discussed, Statoil cites several international regimes regarding the environment and health and safety standards. Where do standards overlap with stakeholder-relevant regimes? (Table 7.1)

Specific standards that Statoil cites include the Global Gas Flaring Initiative (GGFI) and the Extractive Industries Transparency Initiative (EITI). These both apply more to operations in developing countries. It is unclear how unscheduled and excessive flaring from Snøhvit affects “obligations” under GGFI. They are, however, measured and taxed under Norwegian law. Important gaps, as indicated in their respective stakeholder sections, include recognition of the Arctic Council’s “oil and gas guidelines,” the Finnmark Act and ILO 169 - which Norwegian Sámi staunchly demand, but which may not be relevant with respect to offshore activities.

From StatoilHydro Sustainability Reports, it appears that international standards have an ambiguous to minimal effect on CSR outcomes in Hammerfest. Beyond their irregular citation in reports, there is little evidence to illuminate how they influence decisions. Their absence, on the other hand, in the face of stakeholders like the Sámi, is

unexplainable, and demonstrates a degree of reticence on the part of StatoilHydro to address stakeholder needs. This project recommends more detailed accounting of standards, and more specific explanations on their role in decision-making and project development.

Table 7.1 Stakeholders and International Standards or Agreements

Stakeholder	International Std / Legal Regime	Statoil recognition	Statoil Adherence
Sámi	Finnmark Act, ILO 169	No	-
ENGO	OSPAR / GGFI / PAME guidelines	GGFI	Uncertain
Fishermen	Arctic Council	No	-
Local Business / community	EITI	EITI	Uncertain

7.2 ANT in Hammerfest

Actor Network Theory (ANT) provides a framework for analysis of CSR developments in Hammerfest. This project demonstrates the imperfect application of the ANT stages to a dynamic interaction between stakeholders and industry.

The problematisation stage has already been described in Chapter 6, in which Statoil clearly endeavored to define the extent of CSR in Hammerfest. The intressement stage is also observable. Statoil's discourse regarding economic revitalization in the North as coupled with oil and gas development has influenced Hammerfest stakeholders in favor of Snøhvit development. The subsequent stages, however, are less decipherable, and are more a dynamic interaction between stakeholders in the enrolment and mobilization stages – fishermen accepting the terms of construction and development of Snøhvit for example – and mutiny – as the same fishermen challenge new details like the closing of a narrow passage inside Melkøya. Compartmentalizing CSR into neat ANT stages is therefore impossible. Instead, a much more fluid, and organic process, in which stakeholders continually evolved in their relationship with Statoil.

Table 7.2 Observation of ANT Stages in Hammerfest

ANT stage	Statoil	Stakeholder	Outcome
Problematisation	"coexistence"	fishing	Fulfilled
	economic developm't	business	Fulfilled
Intresement	dialogue	fishing	Fulfilled
	dialogue	business	Fulfilled
Enrolment	development	fishing	Unfulfilled
	taxes	business	Unfulfilled
Mobilization	project developm't	fishing	Unfulfilled
	taxes	business	Unfulfilled
Mutiny	n/a	fishing	Fulfilled
	n/a	business	Fulfilled

With respect to Hammerfest business interests, stakeholders also "enrolled" to the point of supporting Snøhvit development, but never fully "mobilized" as they demanded

more from Statoil regarding contributions to local competence and training. The mutiny stage, therefore, becomes a constantly reoccurring phenomenon that advances the stakeholder agenda most. The Sámi have benefited less from mutiny, which appears immediately after intressement in their case. This, as was suggested earlier, is partly the result of their marginalized status as *primary* stakeholder.

CSR, then, is more than statements on paper. It is the beginning of a social contract; the beginning of a dynamic interaction between stakeholders and industry that is continuously influenced by the social, political, and historical landscape *at each project site*, rather than dictations from a corporate headquarters or sustainability reports. By incorporating stakeholders into the development process, corporations must expect an evolutionary process in which stakeholders, too, redefine the operational context from the bottom-up.

7.3 Costs, Benefits and *Pareto* Optimal Outcomes

Gauging whether or not CSR was an efficient tool for minimizing harm and promoting positive spin-offs, however, hinges in part on whether or not *Pareto*-optimal outcomes were attempted – in which each stakeholder's welfare is either enhanced, or at least no worse off than before. Specifically, were the incremental costs accrued to StatoilHydro for its different CSR initiatives approximately equal to the incremental benefits gained by Statoil and the different stakeholders? Did the marginal private costs of implementing CSR equal marginal social benefits? The different costs and benefits of StatoilHydro CSR policies cannot be readily *quantified*, but are first discussed qualitatively in this section, then further analyzed in Table 7.2 for each stakeholder.

7.3.1 Expected Costs and Benefits from CSR in Hammerfest

When StatoilHydro made changes to the pipeline course and direction that it traveled across important fish spawning grounds, fishermen had won themselves a major victory by fending off a threat to their access. On the other hand, this change was a small incremental cost for StatoilHydro with respect to the overall budget of Snøhvit, and resulted in good will and well-developed communication links between the fishermen and the company. This in turn leant legitimacy to Statoil in the eyes of local fishermen, and eventually won Statoil their "approval" as stakeholders. This is a major benefit for Statoil in both the short run and in their long term efforts to pursue development in the Barents Sea.

In a similar manner, implementing CCS technology appeased elements of the environmental community, as well as the government and general public. But in the context of the overall budget for an LNG facility, these were also small marginal costs. The development of alternative, and less toxic, cutting fluids were also low in cost.[68] In each of these instances, the up-front costs to StatoilHydro were matched rather quickly by returns in the form of a social license to operate in the contentious Barents Sea, with ongoing returns from gas exports and future developments a possibility as well.

Stakeholders can use the presence of stated CSR outcomes to hold industry accountable, and to argue for more specific results. CSR provides a beginning point from which stakeholders can elaborate on perceived harm, or positive outcomes, and means to address each. In the process, stakeholders can benefit by collectively organizing. As

[68] Vidnes, Georg. "Environmentally Friendly Production Drilling in the Barents Sea: Experiences form the Snøhvit Field Development Project 2004-2006" Powerpoint Presentation.

Portney (2005) suggests, stakeholders can gain access to a "market" in which to express their interests with respect to the environment, or other outcomes, that influence industry's more traditional cost-benefit analysis. In the process, stakeholders also achieve cost-effective means of influencing the development process.

As discussed briefly in Section 3.3, the cost of CSR will change depending on the project and situation. In Hammerfest, StatoilHydro CSR policies were initially cheap to implement – they were simply commitments to "behave responsibly" as an operator. But as stakeholders demanded specific outcomes, new costs materialized. For the stakeholders, different types of costs develop, but these costs are less onerous and do not pose serious obstacles to participating in CSR (Table 7.2).

Table 7.3 Cost-Benefit of CSR Policies in Hammerfest.[69]

Policy	***Costs to Statoil***	***Benefits to Statoil***	***Fishermen Benefits***	***Sámi Benefits***	***Local Business Benefits***	***Environmental NGOs Benefits***
Alternative pipeline course	*Low* overall marginal cost	Gained Social License from fishermen	Very positive benefits	Low	n/a	Positive
Business Incubation Investment	*Low* overall marginal cost	Continued support of business community	n/a	*Low to negative*	Very positive	n/a
CCS Technology	*Low* marginal cost	Support of government, EU, environmentalists	n/a	n/a	n/a	Positive
General Stakeholder Outreach	*Very Low* marginal cost	Solidifying support of stakeholders	Very positive	Positive	Very positive	Positive

[69]Costs and Benefits are labeled as either "Low," "Very Low," and "Positive" or "Very Positive" based on observations of events described in the text.

StatoilHydro had to invest money to accommodate certain stakeholder demands. These up-front costs were, at the time, matched by only vague future returns of an unquantifiable value. In Hammerfest, however, CCS technology and the pipeline alteration were essentially sunk costs, and were easily outweighed by a license to operate as discussed earlier. Developments in technology, like over-trawlable, undersea drilling platforms for example, are beneficial to fishermen, but are also more efficient and safe for StatoilHydro to operate. They do not represent over–investment in CSR, but rather an advancement in technology that has beneficial consequences for stakeholders, like the fishermen, as well as for StatoilHydro on a global scale. Similarly, expensive technologies like CCS advancement are part of a firm-wide strategy. Moreover, CCS is more easily incorporated into LNG plants, since the carbon must be separated anyway (Heiskanen 2006). Isolating these expenditures as costs associated with CSR in Hammerfest is inappropriate when considering CSR costs and benefits there.

Stakeholders, on the other hand, incur the greatest cost when time is lost from business, trade, or livelihood in order to negotiate or organize opposition. CSR, however, can minimize these opportunity costs by providing more fluid and accessible communication avenues between industry and the stakeholder.

7.3.2 CSR and Efficiency

As described above, the costs and benefits suggest that potentially efficient *Pareto* improving trades are made between stakeholders and industry, at least trending towards socially optimal outcomes. *StatoilHydro experienced low incremental costs when implementing the various CSR policies. Stakeholders, in return, experienced significant*

social benefit (Table 7.3). This is an important argument in favor of CSR as a business practice.

Table 7.4 *Pareto*-Improving Trades in Hammerfest[70]

Stakeholder	***MPC to Statoil***	***MSB***	***Pareto-Improving Trade?***
Fishermen	Low	High	Yes
Biz/Gov	Low	High	Yes
Sámi	Low	n/a	No
Envt'l NGOs	Low	High	Yes

Pareto improving trades were made among individual stakeholders. If the Sámi, currently, are no worse off than before Snøhvit, then a *Pareto* optimum has been achieved for the entire community as defined here. On the other hand, if Sámi are made worse off by increased onshore development in the near future, then a *Pareto* optimum may be unattainable. A *Kaldor-Hicks* optimum, however, in which the net welfare increases, even if some individuals lose welfare, is possible. In this case, the Sámi might demand compensation for this loss in welfare, like the royalties they are currently demanding, returning the community back to a *Pareto* optimum.

Neither outcome explains, however, why certain stakeholders were favored over others, leaving the door open for a premise based on more basic business strategies. If

[70] "Low" measurements are based on evidence discussed in the text. Similarly, "High" benefits are based on evidence from stakeholders throughout the study. Finally, if *Pareto*-improving trades were observed, it was noted as such.

stakeholders like the Sámi are marginalized and do not pose a significant political challenge to development, will industry under-invest in CSR strategies that address harmful spillovers? It is unclear, but poses a troubling question with respect to future CSR development and underscores the "business case" underlying CSR in most cases.

7.4 CSR and Hammerfest Outcomes

Has CSR mitigated negative externalities, and supported local development? This paper suggest that CSR can reduce negative externalities, and stimulate positive externalities *at the margin*, and that the "business case," in which the marginal benefits are greater than marginal costs to the focal actor, still contribute to the outcomes. Some important cautionary notes are warranted, however.

The results of this study only represent developments up to, and including, the first phase of production at Snøhvit. Only follow-up studies will indicate more long-lasting outcomes. With this understanding, however, it is clear that there have been both positive and negative outcomes, but some problems were clearly addressed as a result of robust CSR policies on the part of StatoilHydro.

The CSR definition applied to this case study is a straightforward one: A firm implements strategies to reduce harm from its operations – societal or ecological – even if not required by law. But the firm's relationship with stakeholders complicates this simple definition, and CSR can become a venue for two-way interaction, instead of the traditional top-down vantage point of a benevolent corporation. With a well-documented CSR strategy in place, stakeholders can organize themselves in a manner *that grants them political leverage* vis-à-vis corporate actors. From an economics perspective, property

rights that did not exist earlier (or were ambiguous) were implied to stakeholders, but it was up to the stakeholder to capitalize on this opportunity.

CSR, although initiated by the firm, provides an opportunity for stakeholders to move beyond a defensive strategy, and to make demands on corporate actors to be more proactive – e.g. help host communities *build wealth* rather than simply *mitigate harm*. This realization provides the greatest opportunity for community survival, and even growth and prosperity. Actor-Network Theory demonstrates this relationship in Hammerfest to the degree that it helps recognize different stages of CSR implementation, but it is insufficient for capturing the complicated interaction between stakeholders and the industry actor.

In the Hammerfest case, Statoil had been refining its CSR principles in accordance with international guidelines and norms. With respect to Hammerfest itself, they remained unspecific, but provided a platform for early and frequent stakeholder dialogue. This dialogue is a cornerstone of effective CSR policy, and Statoil demonstrated a willingness to communicate with multiple stakeholders - the community government and local fishermen in particular, but also Sámi and environmental NGOs.

Each stakeholder responded differently to Statoil, on account of their different needs, positions and goals. Hammerfest fishermen engaged Statoil early, and frequently, in order to protect their logistical and ecological needs. But they did not protest Snøhvit itself. In many respects, they were in the best position to protest Snøhvit because of a resource overlap (the Barents Sea itself), and the potential degradation under industrial

pressure. Fishermen in other Norwegian waters are currently protesting petroleum development at home, and succeeding for now.

Hammerfest fishermen capitalized on Statoil's stakeholder dialogue policy, securing changes to an undersea pipeline course, agreements on access to different areas, and assuring the use of technology that minimized its impact on the fishery. Statoil also benefited by developing positive relations with fishermen and generating positive publicity while incurring only minor financial costs.

The Hammerfest municipality government realized the potential for economic revitalization. It also capitalized on open dialogue with Statoil to assure that their community would benefit from Snøhvit. The results of this stakeholder-industry relationship are somewhat mixed, but largely positive. They also demonstrate that Actor Network Theory's classifications are not rigid. Instead of being a passive actor, and accepting Statoil's definition of community development (property taxes for example), the community organized deftly to assure increased local investment. The community did not mutiny in a traditional sense then, because they were very much in favor of Snøhvit development. Instead they organized different institutions, and collectively lobbied Statoil for concrete terms that provided jobs and training.

7.5 Property Rights and Institutions

As described above, CSR has transcended a simple policy definition to become a social contract that *implies property rights* to stakeholders where they may otherwise not exist in a formal sense. This elevates CSR into a potentially powerful tool for community resilience. CSR's increasingly institutionalized and normalized place in business practice

means that even its absence becomes a point of contention, and a starting point for community protest and organization. Without well-defined policies, property rights stemming from CSR will not be assigned to stakeholders. But their absence presents opportunity as well: to demand CSR initiatives, tailored to the local stakeholders, the environment and the specific nature of the development.

As discussed in the "Framework" chapter, A. Allan Schmid (1995) describes how the direction of property rights influences how externalities are internalized. Tradable property rights grant a certain degree of resource "ownership" to the actor to whom property rights flow. If stakeholders obtain ownership of Barents Sea resource, or Hammerfest social welfare, then Statoil must either respect this, or pay to overcome the assigned property right. The Hammerfest case study does not indicate how transaction costs influence CSR outcomes, though it can be used to theorize that transaction costs for stakeholders are reduced more than if property rights are strictly assigned to industry.

The *degree* of property rights is also a function of "stakeholder relevance." Neill and Stovall (2005) would argue that it is a function of "power." This project demonstrates that, regardless of institutionalization, *primary* stakeholders under Statoil's CSR regime are inherently "assigned" greater property rights than other stakeholders. In some respects, this contradicts the assertions of Munilla and Miles (2005) who argue that stakeholder primacy (versus shareholder primacy) permit NGOs and minority stakeholders to "force" firms into CSR commitments that are counter to local, primary, or even majority stakeholders. In this case study, however, very well-organized groups like

environmental NGOs, and the Sámi themselves,[71] were less incorporated into stakeholder dialogue, and less successful at achieving their demands, than primary stakeholders including fishermen and local businessmen. It is unclear if this is strictly a function of location (*primary* stakeholders are integral to the community), or the nature of stakeholder concerns with respect to development (Sámi and environmental groups were in opposition to Snøhvit in some respects, versus primary stakeholders, who lobbied to influence the dimensions and outcomes of development, not challenge its existence).

The fishermen and local suppliers' self-organization is also consistent with institutional theory that suggests incremental development in response to perceived need (Haley 2004). All stakeholder groups in Hammerfest – primary or secondary – demonstrate robust institutional performance.[72] This partly explains institutional effectiveness in Hammerfest, but does not explain differences between stakeholders. Again, CSR might partly explain successful outcomes for primary versus secondary stakeholders.

When considering CSR and *Pareto* optimality, the results suggest efficient movements towards more socially optimal outcomes where marginal private costs to Statoil are less than or equal to social benefits to stakeholders in places. When examining on a stakeholder-by-stakeholder basis, it can be argued that *Pareto* improving agreements were struck, like between the fishermen and StatoilHydro. On the other hand, when including the mosaic of stakeholders, *Pareto* optimality is not clearly achieved. This also

[71] Sámi institutions include the Sámi Parliament in Karasjok, Norway, the Sámi University College and Gáldu (Resource Center for the Rights of Indigenous Peoples)

[72] From Haley (2004), "Design Principles" include, "clear boundaries and memberships, congruent rules, collective choice arenas, monitoring, graduated sanctions, conflict resolution mechanisms, recognized rights to organize," and "nested units."

corresponds with Schmid's (1995) observation that multiple parties complicate the role of property rights and their distribution.

7.6 Regulation

Companies pursue CSR for a variety of reasons including the right to market their "greenness," inspire/attract/retain good workers, and to pre-empt potentially costly regulation (Portney 2005). In the Hammerfest case study, CSR results in efforts to reduce discharges to sea and air – including CO_2 via CCS technology separating CO_2 from the well stream (it does not capture CO_2 from its gas-fired power plant – responsible for the greatest number of CO_2 emissions). But when StatoilHydro miscalculated its start-up procedures on Melkøya, the result was excessive flaring, soot blown over Hammerfest, and more CO_2 emissions in one month than had been permitted for the entire year.

Ardent citizen complaint was met with stakeholder outreach and apologies. CSR, besides stakeholder outreach and a verbal commitment to be accountable, could not provide any short-term "fix." The regulatory reaction, on the other hand, included fines for excessive emission levels, and increased tax payments because of the state CO_2 tax.

This anecdote simply underscores that CSR is not a substitute for effective regulation, and that episodic pollution events like these cannot be avoided (Portney 2005), though the probability of them occurring can be lowered. CSR can therefore complement more traditional regulation, and facilitate compliance (or beyond-compliance) and reduce the probability of such episodic events by incorporating better information.

Negative externalities are *market failures* that exist, in part, because they are not accounted for in business practice and operating costs. Regulation is often required intervention to help "fix" such externalities. Though regulatory flexibility and CSR might be "socially beneficial and conducive to private cost savings through reduced regulatory burden" (Esty 2005), CSR on its own seems incapable of internalizing externalities. Instead, a "polluter pays" mandate remains necessary and most effective (Esty 2005). Early outcomes in Hammerfest support this premise.

7.7 Limitations and Future Research

This thesis considers the outcomes of a specific case study, with respect to CSR policies in place, and local stakeholders. StatoilHydro, through considered an industry CSR leader, has still struggled with corruption, pollution, and questionable investments.[73] This fact simply demonstrates one limitation of my study. Just as Shell CSR was highly developed in a Peruvian case study (May 1999), Shell has also been condemned for high-profile abuses and shortcomings elsewhere.[74]

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[73] Statoil's CEO and chairman stepped down in 2003 after an investigation into bribes paid for access to Iranian oil fields now referred to in Norway as the Horton Affair. Statoil was fined by Norwegian authorities in 2004. The United States Justice Department is investigating Statoil's ongoing investments in Iran to assure their compliance with U.S. sanctions. The firm has also recently invested in Alberta oil sands production and Chukchi Sea leases – both considered environmentally sensitive projects. Statoil was also held responsible for a 27,500 barrel oil spill in the North Sea on December 12, 2007 (http://www.sft.no/artikkel____42462.aspx?cid=29292).

The Norwegian Pollution Control Authority considered Statoil negligent on several counts, and cited the company for insufficient preparedness for oil spills, including poor management and poor equipment. Finally, it operates in countries like Azerbaijan, Nigeria and Algeria which all score poorly in Transparency International's Corruption Perception Index. Statoil has not been criminally charged in any of these regards.

[74] In 1995, the controversial dismantling of the Brent-Spar platform in the North Sea was followed by accusations that Shell was complicit in the Nigerian government's hanging of an Ogoni human rights activist, Ken Saro-Wiwa, which precipitated consumer boycotts and a large public outcry.

The Hammerfest case study, however, might suggest a new strategy for evaluating firms. Instead of a macroscopic consideration that heavily relies on self-reporting and Sustainability Reports, firms could be judged after aggregating the success of CSR policies on the ground at each of project site. This might help tailor policies to better address local concerns and risks, instead of a headquarter-based policies that are less flexible.

In Norway, CSR has evolved considerably from empty "feel good" statements into a more scrutinized practice. For example, ENI's arrival in Finnmark was accompanied by a CSR strategy that, in contrast to StatoilHydro's, gave a much more prominent role to Sámi leaders. The result has been a strange "race to the *top,*" where firms are competing for the best, most effective CSR strategy. As this thesis demonstrates, this does not mean that every party will be satisfied, but it is a business environment that, if replicated in other locations, could speed and stimulate more effective CSR policy by industry.

Norway's well-developed institutional capacity, rule of law, and well-defined property rights make the Hammerfest case study an inadequate comparison for many indigenous communities, or for communities in less developed countries. StatoilHydro's political and cultural ties to Norwegian stakeholders also contributed to the necessity of a positive outcome in the Barents Sea, or at least positive stakeholder relationships.

This project nonetheless demonstrates potential positive outcomes resulting from imbedded CSR practices, including the transfer of property rights to stakeholders and community political leverage to manipulate outcomes in a community's favor. This could

have implications for other Arctic and sub-Arctic communities - like those in Finnmark, the Faeroe Islands, or Bristol Bay, Alaska, where fisheries are encountering increased oil and gas prospecting, and environmental, institutional, and demographic scenarios resemble northern Norway.

Future work should include stakeholder surveys that assure a representative sample from the community in question, and it might better estimate the cost-effectiveness of CSR. Quantifying indirect values, like ecological service flows including air quality, might better evaluate the *cost* of pollution events like the soot incident in Hammerfest. Willingness to accept (WTA), or willingness to pay (WTP) studies that might more completely indicate the economic impact from CSR. Resources and time were unavailable for this project to pursue these questions, but they would make a significant contribution to CSR literature in subsequent studies.

This study also took institutionalized CSR for granted, arguing that contemporary business has accepted CSR as *de rigeur* practice. But as corporations from emerging markets increasingly partake in global resource extraction – Chinese and Russian companies have expressed interest in Alaska natural gas, for example - it remains unclear how these same entities regard CSR, and what their increasing share of global business means for CSR. Widespread disregard for CSR by emerging companies risks reversing CSR's normalized role in current business. Similarly, recent global financial "shocks" have raised questions about the "cost" of socially responsible business practices – still perceived from an antiquated bottom-line mentality, and threaten the recent trend towards stakeholder prominence.

8 Conclusion

The fact that results from CSR initiatives in Hammerfest are imperfect is not surprising. CSR attempts to curtail negative externalities, or capitalize on positive spin-offs, in a pre-emptive manner and cannot ultimately prepare a community or industry for inevitable mishaps. This paper nonetheless demonstrates the potential value of CSR to communities that confront large-scale industrial development with inherent risks. Incorporating stakeholders and their values yields a more complete cost-benefit analysis that results in an efficient reduction of harmful externalities and similarly promotes positive outcomes. In this case study, the greatest winners were local business groups and suppliers who wanted to assure that money and employment benefited the community and the region. Less successful were environmentalists and the Sámi. Some of the reasons why have been discussed, but these outcomes raise different questions that have not been answered: Will this unequal treatment of stakeholders always be the case? Will business always be accommodated over the environment, and what if the business is inextricably tied to environmental health, or the "business" is a subsistence activity that depends on environmental sustainability?

The outcomes in Hammerfest demonstrate a degree of community development, but they do not suggest *sustainability*. StatoilHydro's answer to regional stakeholders in Finnmark who seek economic revitalization is increasingly: "more acreage." In other words, while suppliers have successfully stemmed the flow of money to southern Norway, and stimulated positive economic development in Hammerfest, the local

economy is still dependant on a finite natural resource with notable negative externalities. CSR, in this case study, has tangible results that minimized risk to fishermen. It has also helped position local stakeholders to capitalize on a resource boom, more than they might have otherwise. But it is unclear if CSR has positioned the community to weather the "bust." It is also unclear if CSR can, or even if it should perform those functions. In this paper CSR was examined under the lens of externalities, to better understand how CSR addressed them. CSR, therefore, is a piece – arguably an important one – of a puzzle that includes a regulatory framework, strong institutions, and a diverse economic outlook that considers more than resource extraction for salvation.

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Appendix A: Interviews

Institution/Stakeholder (number of interviews)	*Role / Description*
Hammerfest Fishermen (4)	Primary Stakeholders
Norwegian Fishing "Union" (1)	Stakeholder organization
Sámi Parliament Members/staff (3)	Stakeholder organization
Sámi Reindeer Herders (2)	Stakeholders
Finnmark Fylkeskommune (2)	Regional government authority
Barents Secretariat (1)	Regional development entity, funded by Norwegian government
Hammerfest Kommune (3)	Primary Stakeholder
Kol Arctic (1)	Norwegian group encouraging Russian collaboration for regional development
Petro Arctic (2)	Local supply and contractor initiative
EnergiCampus Nord (2)	Local Competence / Education initiative
Hammerfest Turist (1)	Stakeholder: local tourist division
Bellona (2)	Norwegian Environmental NGO, based in Oslo
WWF Norway (2)	Environmental NGO, based in Oslo
Nature and Youth (1)	Environmental NGO, based in Oslo
Norwegian Ministry of Foreign Affairs, High North Division (1)	National Government, with focus on energy policy and the North
Statoil / StatoilHydro (5)	Focal Actor / Industry
Dagens Nærlingsliv (1)	Norwegian Business Daily
Nordlys (1)	Finnmark Newspaper
Northern Research Institute (Norut) (2)	Social research institute with a northern Norway concentration, based in Alta
ENI (1)	Italian energy company pursuing Goliat oil field, with a Hammerfest office
North Energy (1)	Finnmark-based energy company

Appendix B: Snøhvit Timeline

1984	Statoil discovered Snøhvit on the Tromsø Patch in the Barents Sea
1991-1997	An attempt was made to establish a basis for developing the area. The plan was for an offshore field development and gas liquefaction plant on Sørøya near Hammerfest that would sell LNG to the Italian market. Statoil halted the planning process, citing cost and market factors. A new solution for developing the field was proposed, with a facility on Melkøya island outside Hammerfest and subsea production installations remotely operated from land.
1991-1993	Protests against various oil companies' exploration operations in the Barents. Bellona filed suit against Statoil to halt drilling activities.
1998	New proposal submitted to the ministry in the following year. This included both new impact assessments and upgrading of preparatory work done in the previous development process. Carbon capture and storage now included in the plan.
1998-2001	Negotiations and seminars with experts and authorities in Finnmark, information meetings with locals in Hammerfest.
April 2001	New Environmental Impact Statement (EIS) published.
July 2001	Snøhvit's partners put the project on hold because of lack of clarity over government taxation terms.
September 2001	Special tax benefits approved by European Free Trade Association's (EFTA) Surveillance Authority (ESA). Contract with partners signed. Statoil submitted a plan for development and operation (POD) of the field.
October 2001	Long-term sales contracts signed with El Paso LNG, Iberdrola, Gaz de France and Total.
December 2001	Due to poor economic situation of the project, Finance Minister announced that ways to support the project would be investigated.
January 2002	POD presented to Parliament. Environmentalists organize intensive protests.
March 2002	POD for LNG plant approved by Norway's Parliament in March 2002. Statoil announces that tax position is unclear due to the involvement of the ESA.
May 2002	Pollution Control Authority allows Statoil to start construction work (preparation of the site and filling of land).
July 2002	Resolution of the tax position by the ESA.
August 2002	Statoil announces that delays caused by the ESA tax investigation have increased costs by € 130 million.
October – December 2002	Following a detailed project review, CEO says that the project's management and organization need to be strengthened to ensure cost control and progress: costs have risen by € 740 million, to 5.75 billion.
June 2003	EFTA Court rules against Bellona's action against the ESA.
2004	Following an 'extraordinary review', Statoil's board is notified that costs could rise by a further € 510-760 million. Risk of delay by 6-12 months. Measures implemented to deal with failures by contractors and equipment suppliers. Statoil's cost overruns discussed in the Oil and Energy Ministry and Parliament.
June 2005	Partners launch studies to assess doubling the plant's capacity.
July 2005	Hammerfest Energi submits EIS for 100 MW power plant to Pollution Control Authority, and complains in public that Statoil has refused to contribute to its project.
September 2005	New review reveals that cost estimates have risen and further delays are expected. Cost estimate rises to € 7.42 billion. Deliveries scheduled to begin in December 2007. Statoil starts to secure alternative supplies for US and Spanish customers.
November 2005	Remote control system and power relay tested and remote monitoring system in

	operation.
January 2006	Statoil announces that it will re-evaluate whether oil production from the Snøhvit field could be profitable.
March 2006	Shell and Statoil sign an agreement to work towards developing the world's largest project using carbon dioxide (CO_2) for enhanced oil recovery (EOR) offshore. Gassnova is awarded funding to test and verify Hammerfest Energi's carbon scrubbing technology.
October 2007	The first vessel with a cargo of liquefied natural gas from the Snøhvit field leaves port at Melkøya.
August 2007	Snøhvit comes on stream.
August 2007	Soot incident: Emissions from excessive flaring condense and cover the community in black "soot," leading to public irritation and confusion. Public meetings follow.
November 2007	Leak in cooling system leads to closure.
January 2008	StatoilHydro gives SFT an update on the emissions of CO2, NOx, CH4, VOC, soot and PAH from the initial the start-up period. The company estimated that there may have been "extraordinary emissions" of up to 1.5 million tons of CO2 and 2200 tons of soot from flaring from the LNG plant in this period. StatoilHydro will buy emission credits for the carbon emissions.
February 2008	The Bellona Foundation sues StatoilHydro over alleged violations of Norwegian environmental law in the Snohvit project. The foundation agued that the oil major is not entitled to restart production of LNG in the Snohvit project before an application for more emissions is approved. StatoilHydro restarted production of LNG in the Melkøya plant, but the application to the Norwegian Pollution Control Authority had not yet been approved.
March 2008	Cooling system difficulties close plant again.
July 2008	Opens at 60 % capacity

Source: BarenstObserver.com and based on the timeline developed by Heiskanen (2006)